The Integrity of Rows 1 and 2 U-Bends in the Prairie Island Unit 1 Steam Generators

NRC Meeting with Prairie Island

February 9, 2001

NRC Headquarters, Washington DC

ENCLOSURE 2

Representing Prairie Island

- Joel Sorensen, Site Vice President, General Manager, Prairie Island Nuclear Generating Plant, PINGP
- Richard Pearson, Steam Generator Program Manager, PINGP
- Scott Redner, Steam Generator NDE Consulting Specialist, XCEL
- Jim Begley, Steam Generator Tube Integrity Consultant, E-Mech
- Doug Johnson, Regulatory Affairs, NMC

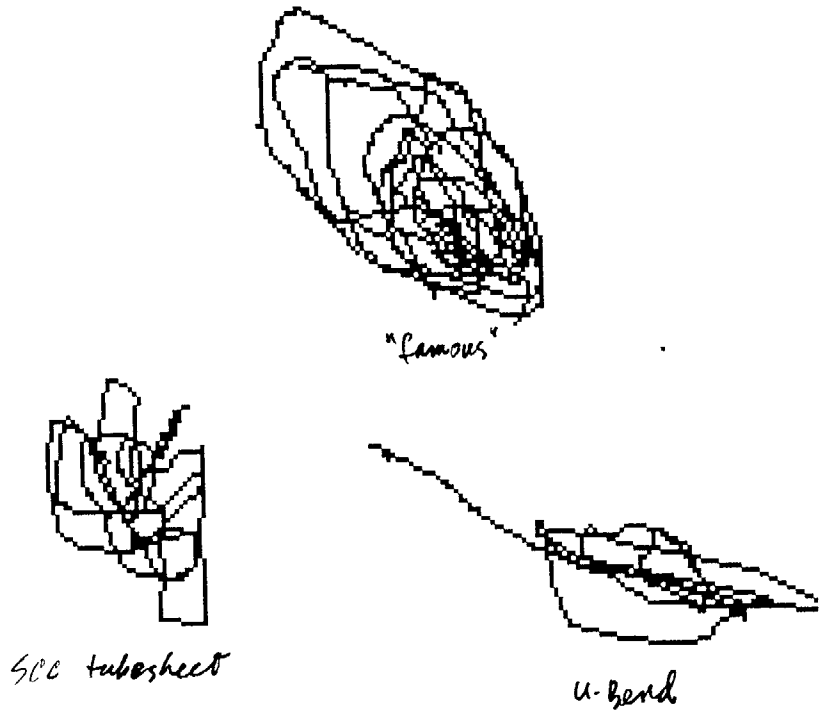
Meeting Objective

- To demonstrate that flaws of potential tube integrity significance will be reliably detectable against the full range of noise signals present in the tubing at Prairie Island Nuclear Generating Plant 1
- Evaluate Prairie Island specific information on the capability of an eddy current analyst to detect an indication representative of a flaw which would exceed the structural performance criterion of NEI 97-06 and NUREG-1022 Revision 2 by the end of the next cycle.

Agenda

- Low Row U-bends
  - ET 101 from an Engineer's Perspective
  - Prairie Island +Point™ "Setup"
  - ET Noise Characteristics at Prairie Island
  - ET Flaw Characteristics at Prairie Island
  - Review of Eddy Current Signals from Prairie Island
  - Independent Qualified Data Analyst
  - Structural Integrity Assessment
- Conclusions on Low Row U-Bends
- Update On Sleeve Plug Issue

ET 101- A Chemical Engineer's Explanation of Eddy Current "NOISE"



Eddynet 98 Graphics, Simple

- 0 Degrees is in the wrong place!
- The "flaw plane"
  - Horizontal Motion, Volts Peak to Peak, Volts Vertical Max, Horizontal Volts
- A primary side flaw is less than 40 degrees
- A secondary flaw is greater than forty degrees
- Where is the classic lissajou pattern?
- The "window"
- It is not "flaw like"
- Lissajou Pattern for an EDM Notch Cal Standard with notches 180 degrees apart from each other

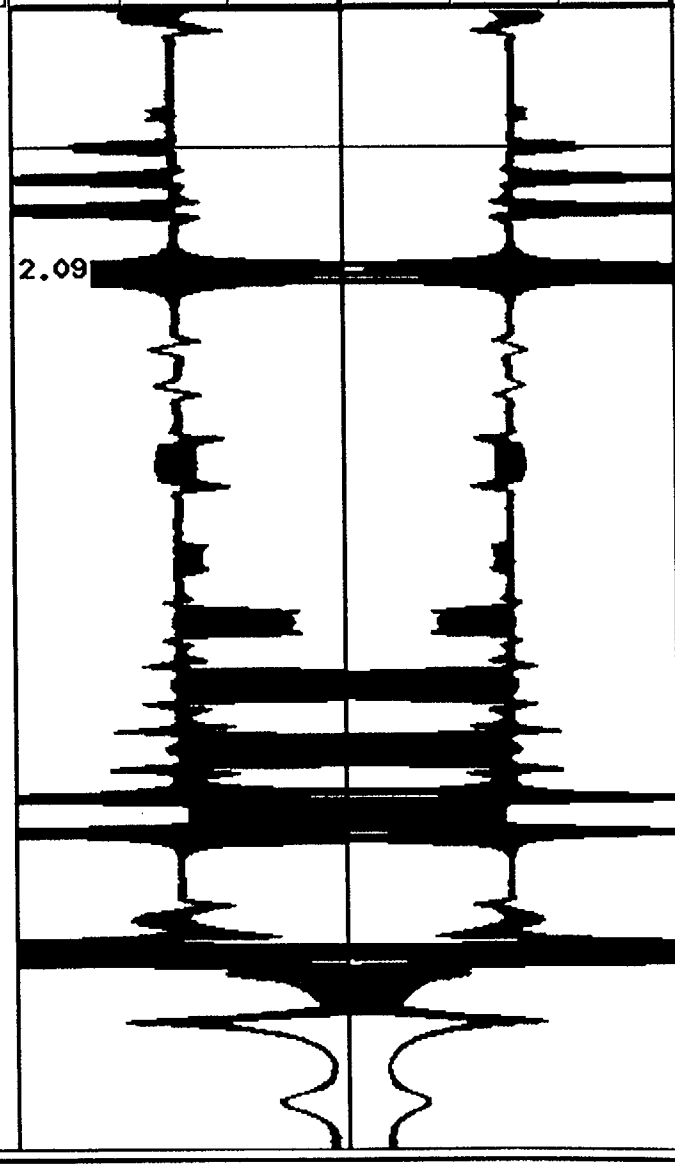
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

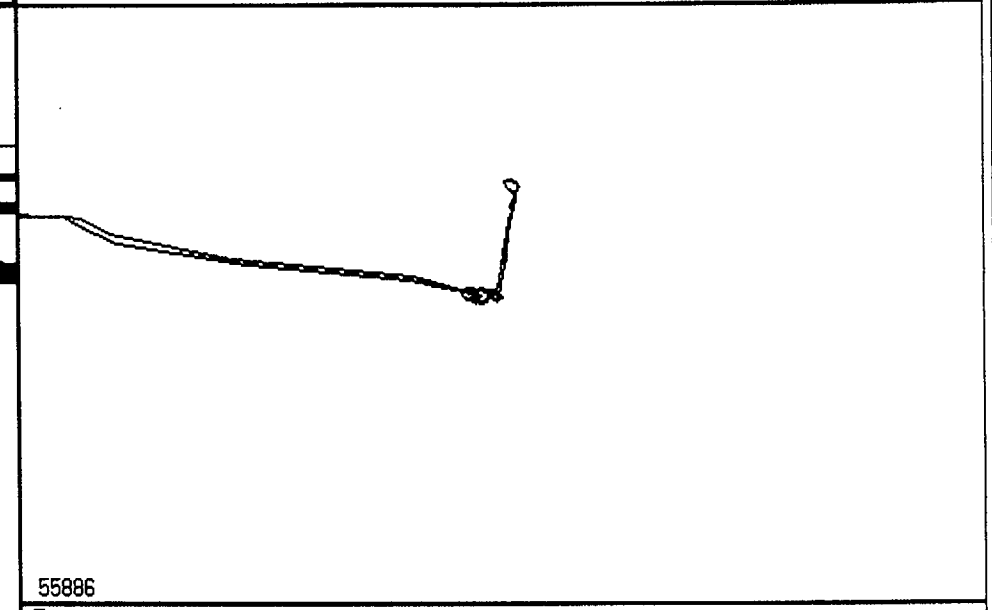
File Analysis System Tools Layout Add Displays Help

Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG12HCAL00042 FRI 3:44:56 JAN-26-2001 SG 12 ROW 999 COL 999 I007

< Lmrks >	2	300	+AX	P2	300	+CIRC	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.24 v/d		span 27		rot 46



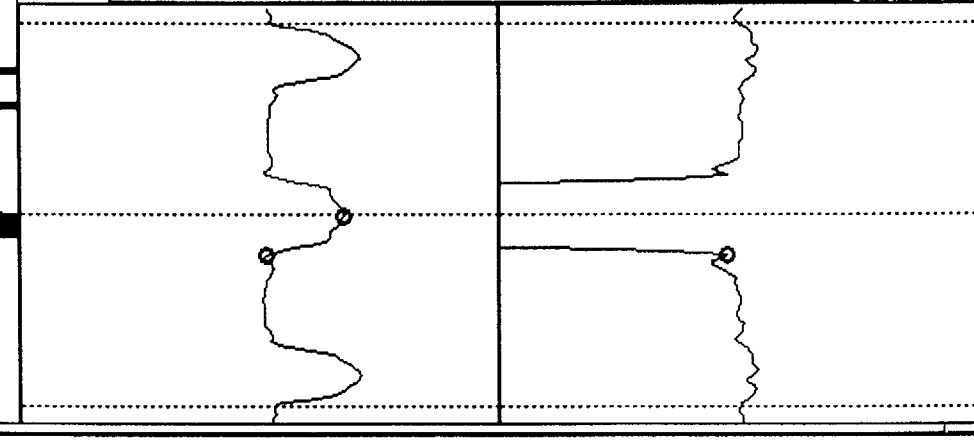


Vpp MxR Vmx GAn 180

2.14 volts 10 deg

+ 55886

chan > <



Summary of Eddy Current Noise in Rows 1 and 2 U-Bends

- Average Voltage Responses for Apex, Tangent, Review Statistics by Richard
- A different way of looking at distributions

Independent QDA Review of NDD Rows 1 and 2 U-Bend Data

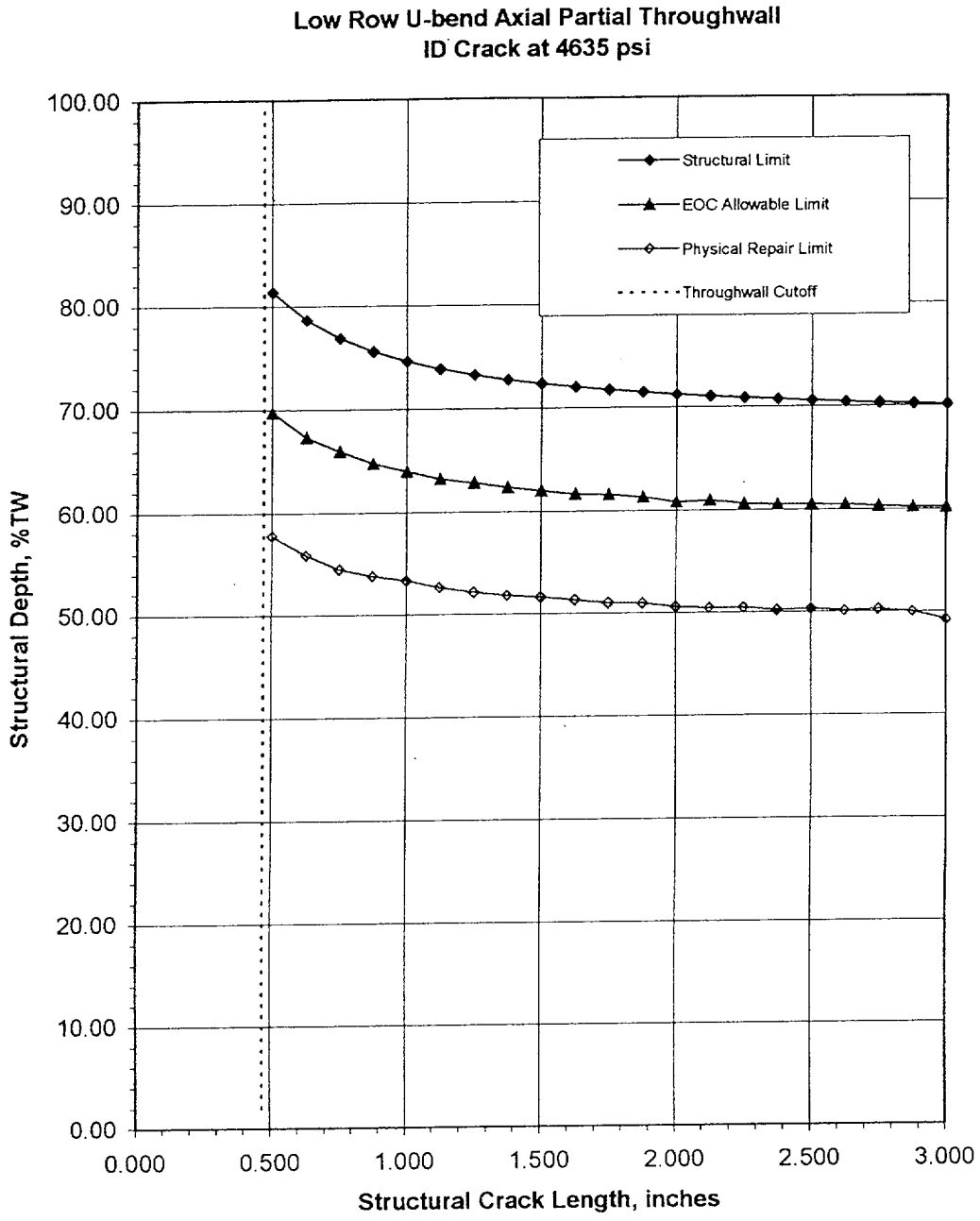
SG	Row	# In Service	#Analyzed by IQDA
11	1	92	17
12	1	39	26
11	2	92	10
12	2	86	29

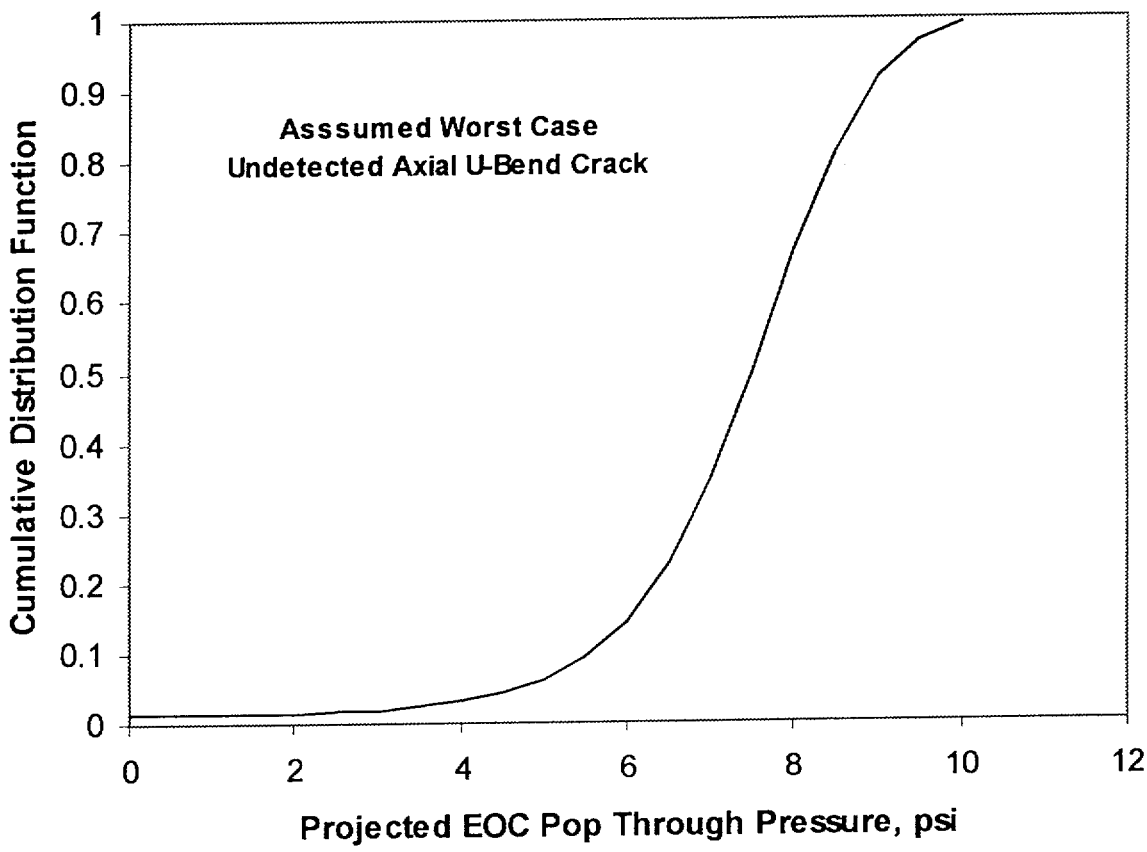
ABBCE MECHANICAL ROLLED PLUG PRIARIE ISLAND 12 SG

- Visual Examination of Sleeve plugs installed in PI 12 SG
  - 116 of 149 examined, no visual anomalies
- UT Examination of Sleeve plugs
  - 116 of 149 examined, minimum thickness greater than .045"
- Visual Examination of Tube plugs
  - 600 of 649 examined, no visual anomalies
- UT Examination of Tube plugs
  - ~100 of 135 examined, minimum wall thickness greater than .100"
  - Represents > 20% of installed population

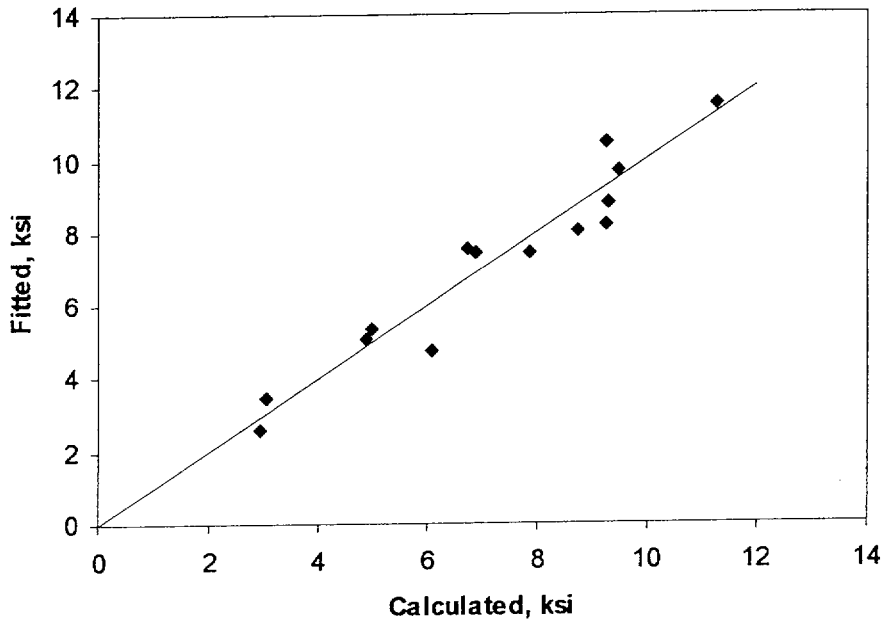
ABBCE MECHANICAL ROLLED PLUG NEW TUBE AND SLEEVE PLUGS

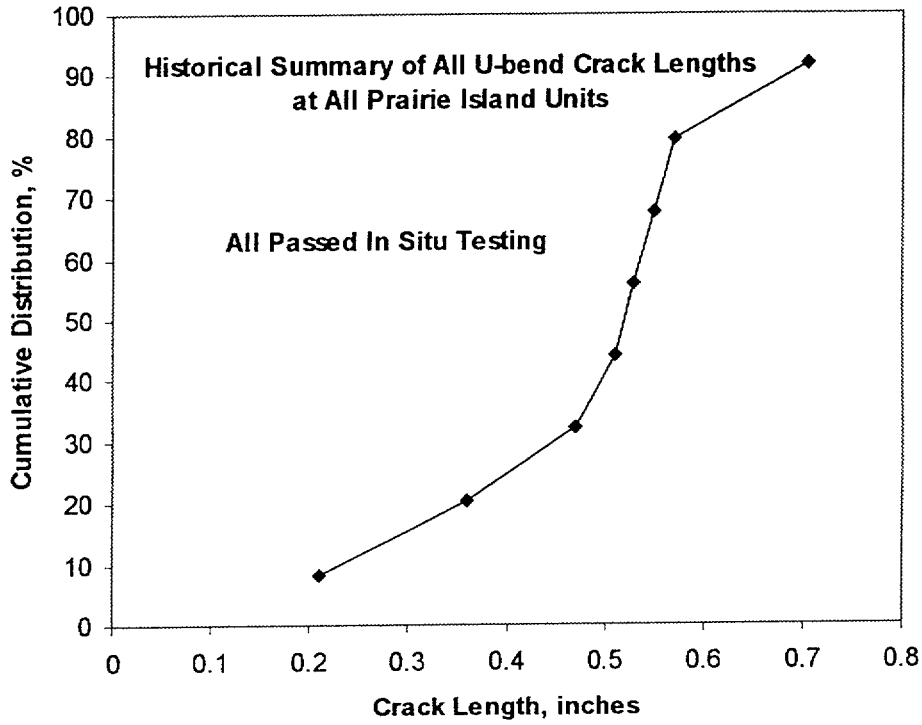
- Sleeve Plugs
  - 375 examined
  - All dimensions within drawing tolerances
- Tube Plugs
  - 2567 examined
  - All dimensions within drawing tolerances

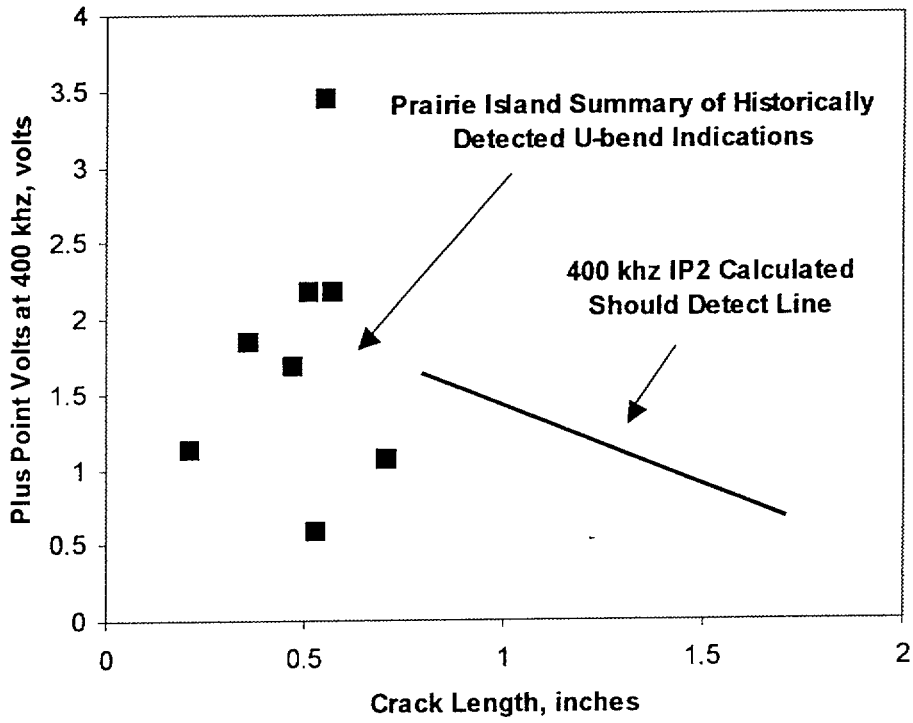

Low Row U-bend Axial Partial Throughwall
ID Crack at 4635 psi
Structural Limit
EOC Allowable Limit
Physical Repair Limit
Throughwall Cutoff
Structural Depth, %TW
100.00
90.00
80.00
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
0.000
0.500
1.000
1.500
2.000
2.500
3.000
Structural Crack Length, inches

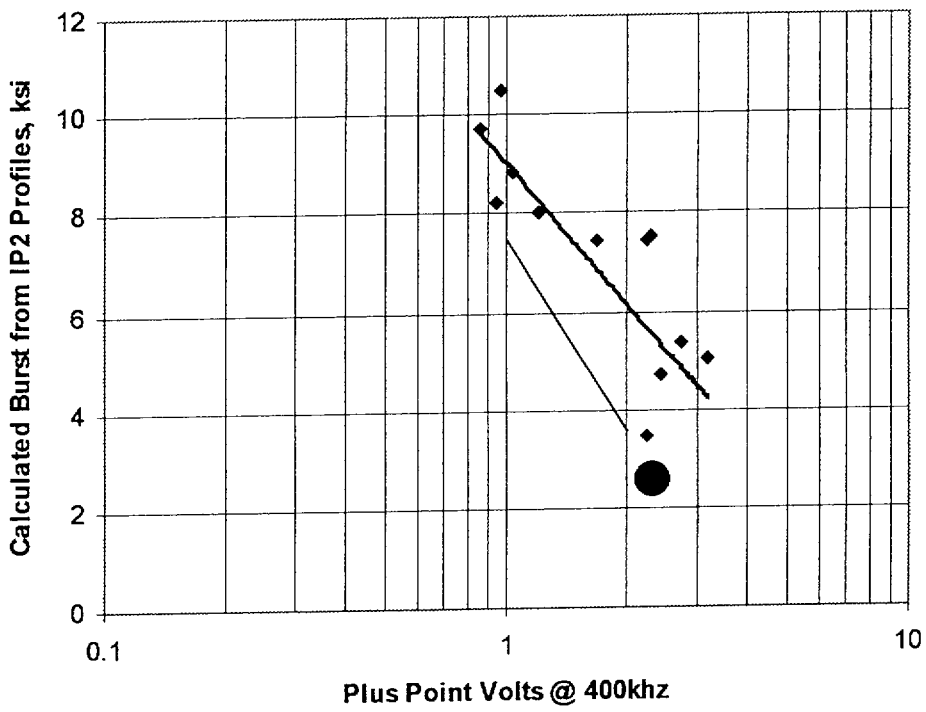

Asssumed Worst Case
Undetected Axial U-Bend Crack
Cumulative Distribution Function
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
2
4
6
8
10
12
Projected EOC Pop Through Pressure, psi

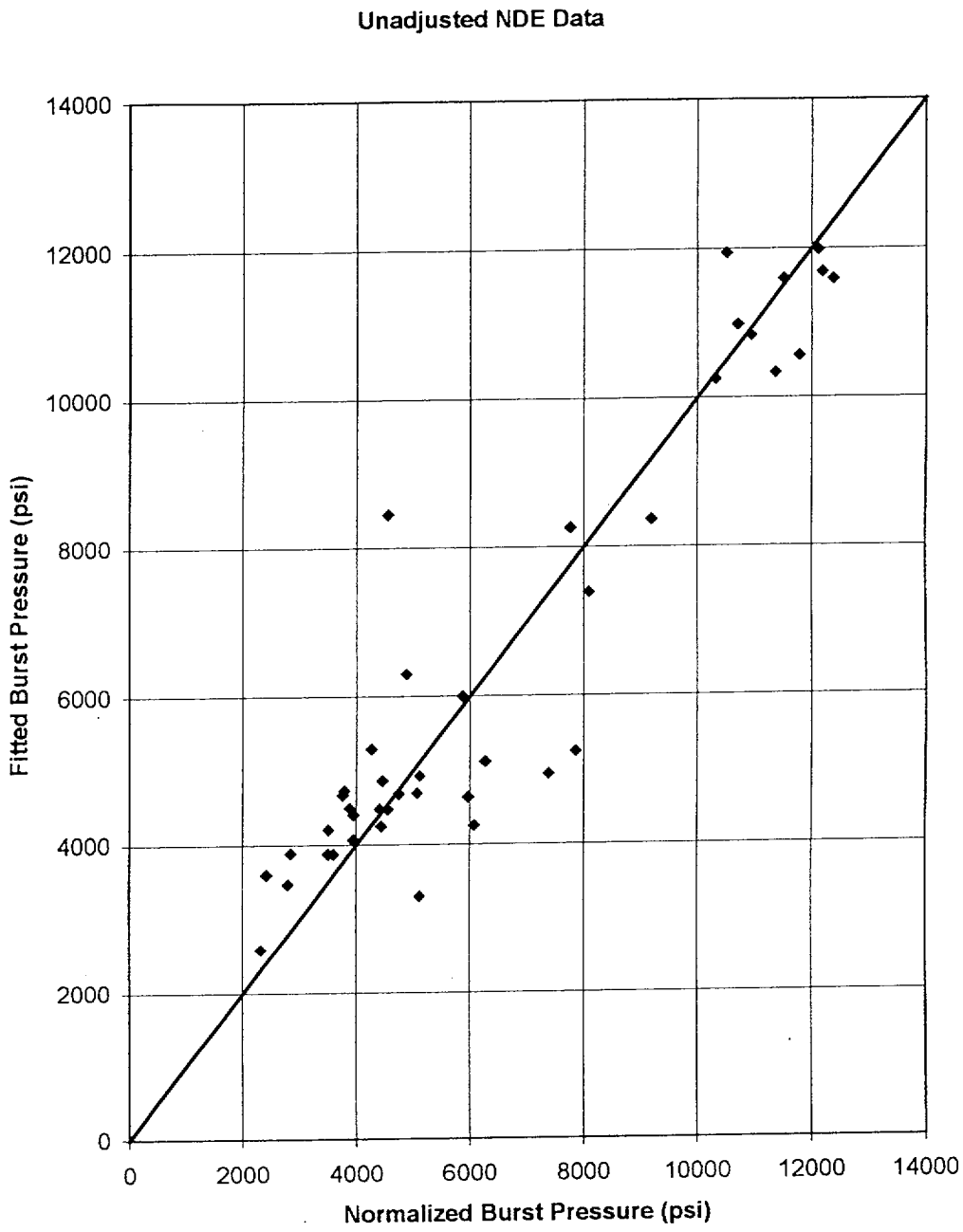
400 kHz IP2 Crack Profiles

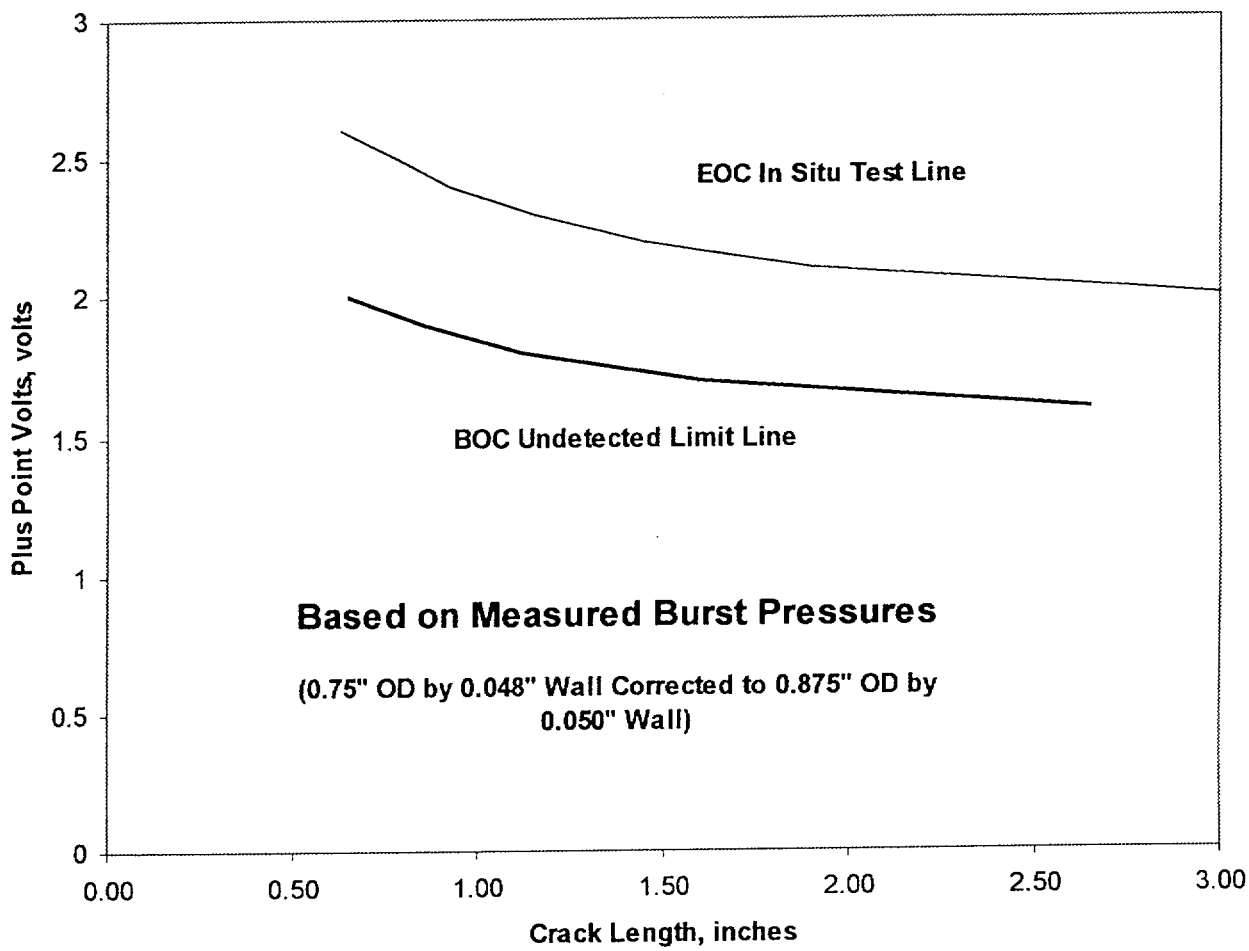



Historical Summary of All U-bend Crack Lengths
at All Prairie Island Units
All Passed In Situ Testing
Cumulative Distribution, %
Crack Length, inches
0
10
20
30
40
50
60
70
80
90
100
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8


Prairie Island Summary of Historically Detected U-bend Indications
400 khz IP2 Calculated Should Detect Line
Plus Point Volts at 400 khz, volts
Crack Length, inches
0
0.5
1
1.5
2
2.5
3
3.5
4

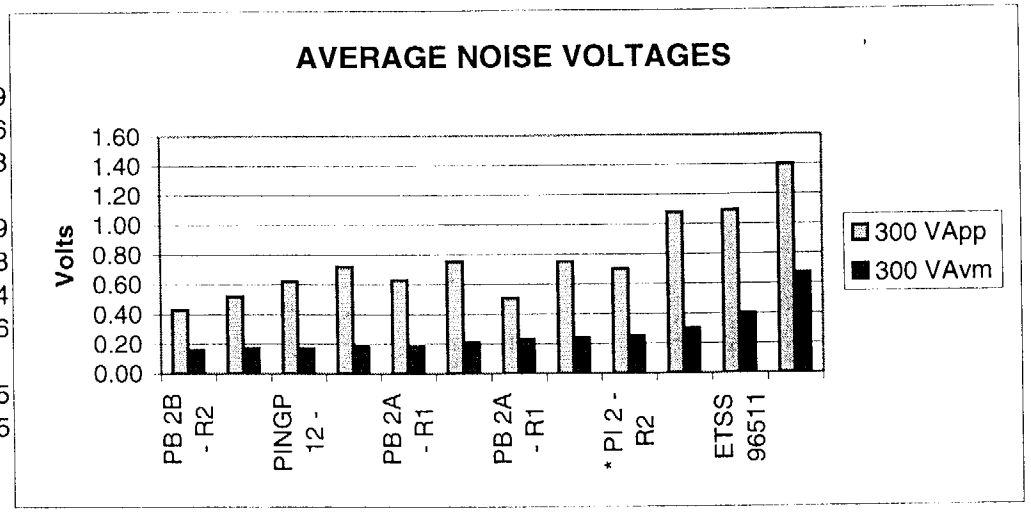

12
10
8
6
4
2
0
0.1
1
10
Calculated Burst from IP2 Profiles, ksi
Plus Point Volts @ 400khz


Unadjusted NDE Data
Fitted Burst Pressure (psi)
Normalized Burst Pressure (psi)
0
2000
4000
6000
8000
10000
12000
14000


3
2.5
2
1.5
1
0.5
0
Plus Point Volts, volts
EOC In Situ Test Line
BOC Undetected Limit Line
Based on Measured Burst Pressures
(0.75" OD by 0.048" Wall Corrected to 0.875" OD by 0.050" Wall)
0.00
0.50
1.00
1.50
2.00
2.50
3.00
Crack Length, inches

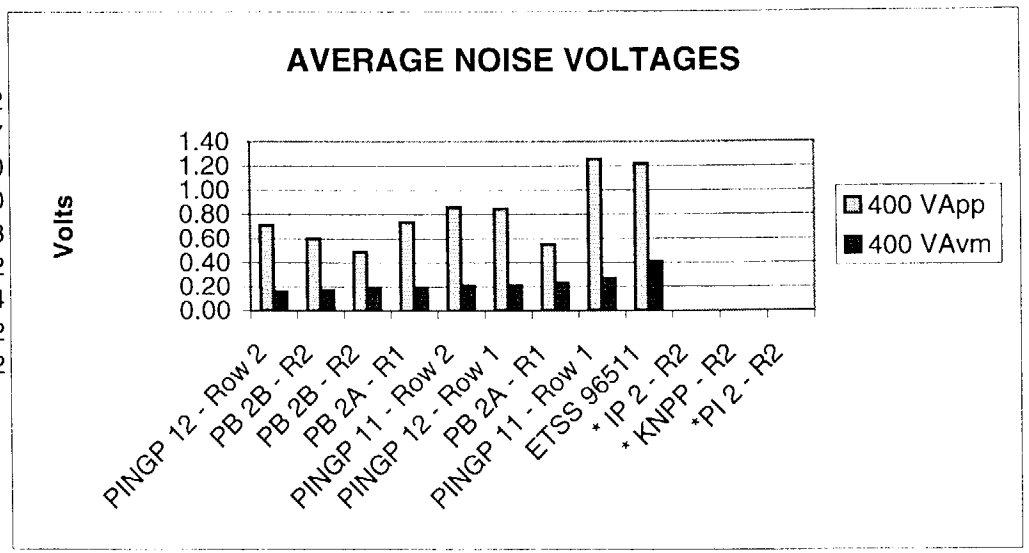
AVERAGE NOISE VOLTAGES

Plant	300 V_{App}	300 V_{Avm}	300 V_{Tpp}	300 V_{Tvm}
PB 2B - R2	0.43	0.16	0.39	0.19
PB 2B - R2	0.52	0.17	0.45	0.16
PINGP 12 - Row 2	0.62	0.17	0.71	0.23
* KNPP - R2	0.72	0.18		
PB 2A - R1	0.63	0.18	0.57	0.19
PINGP 12 - Row 1	0.75	0.21	1.26	0.48
PB 2A - R1	0.51	0.23	0.49	0.24
PINGP 11 - Row 2	0.75	0.24	0.87	0.26
* PI 2 - R2	0.70	0.25		
PINGP 11 - Row 1	1.08	0.30	1.08	0.35
ETSS 96511	1.09	0.40	1.49	0.65
* IP 2 - R2	1.40	0.67		



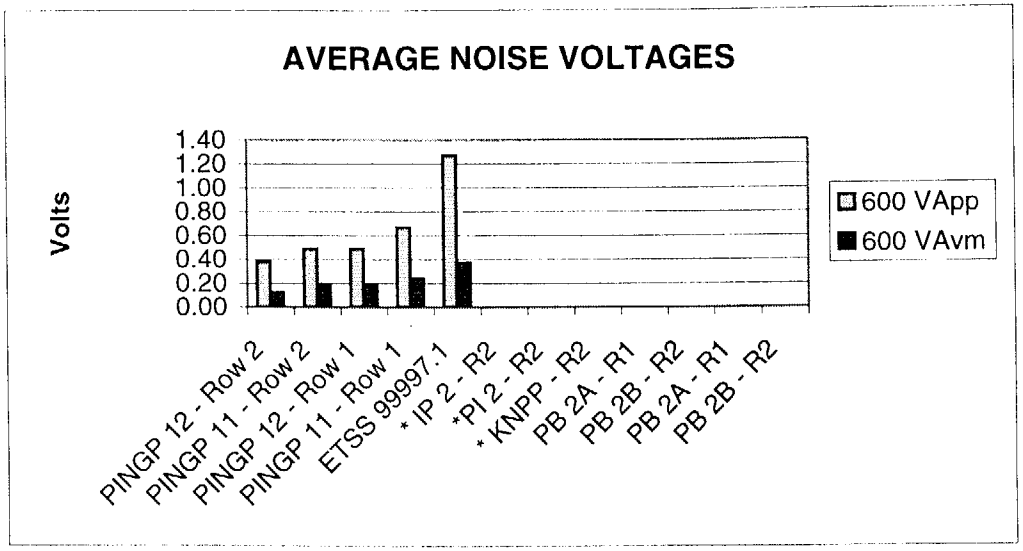
AVERAGE NOISE VOLTAGES

Plant	400 V_{App}	400 V_{Avm}	400 V_{Tpp}	400 V_{Tvm}
PINGP 12 - Row 2	0.71	0.16	0.80	0.22
PB 2B - R2	0.60	0.17	0.52	0.17
PB 2B - R2	0.49	0.18	0.44	0.20
PB 2A - R1	0.74	0.19	0.66	0.20
PINGP 11 - Row 2	0.86	0.21	0.98	0.23
PINGP 12 - Row 1	0.85	0.21	1.38	0.42
PB 2A - R1	0.55	0.23	0.52	0.24
PINGP 11 - Row 1	1.26	0.27	1.21	0.32
ETSS 96511	1.22	0.41	1.62	0.62
* IP 2 - R2				
* KNPP - R2				
*PI 2 - R2				



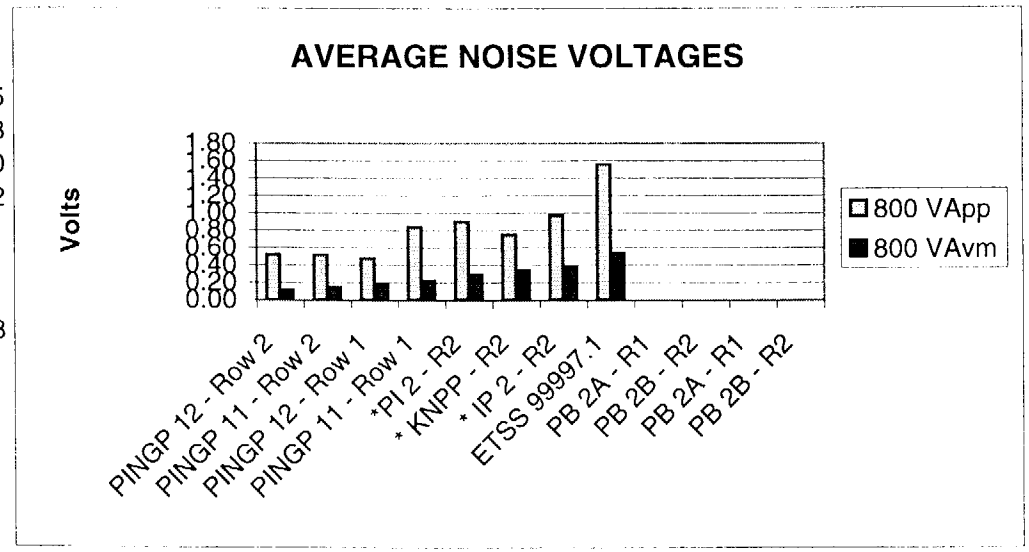
AVERAGE NOISE VOLTAGES

Plant	600 V_{App}	600 V_{Avm}	600 V_{Tpp}	600 V_{Tvm}
PINGP 12 - Row 2	0.38	0.12	0.58	0.20
PINGP 11 - Row 2	0.49	0.19	0.70	0.29
PINGP 12 - Row 1	0.49	0.19	1.11	0.52
PINGP 11 - Row 1	0.67	0.24	0.85	0.36
ETSS 99997.1	1.27	0.37	2.04	0.62
* IP 2 - R2				
*PI 2 - R2				
* KNPP - R2				
PB 2A - R1				
PB 2B - R2				
PB 2A - R1				
PB 2B - R2				



AVERAGE NOISE VOLTAGES

Plant	800 V_{App}	800 V_{Avm}	800 V_{Tpp}	800 V_{Tvm}
PINGP 12 - Row 2	0.52	0.11	0.83	0.15
PINGP 11 - Row 2	0.52	0.15	0.69	0.23
PINGP 12 - Row 1	0.48	0.19	1.14	0.50
PINGP 11 - Row 1	0.84	0.22	1.01	0.32
*PI 2 - R2	0.90	0.29		
* KNPP - R2	0.75	0.34		
* IP 2 - R2	0.97	0.37		
ETSS 99997.1	1.56	0.54	2.50	0.88
PB 2A - R1				
PB 2B - R2				
PB 2A - R1				
PB 2B - R2				



* Phase set with 40% ID @ 15 degrees - All other measurements have phase set @ 35 degrees on 100% notch. These differences equal 1

	300 V_{App}	400 V_{App}	600 V_{App}	800 V_{App}
PINGP 11 - Row 1	1.08	1.26	0.67	0.84
PINGP 12 - Row 1	0.75	0.21	1.26	0.48
ETSS 96511	1.09	0.41		

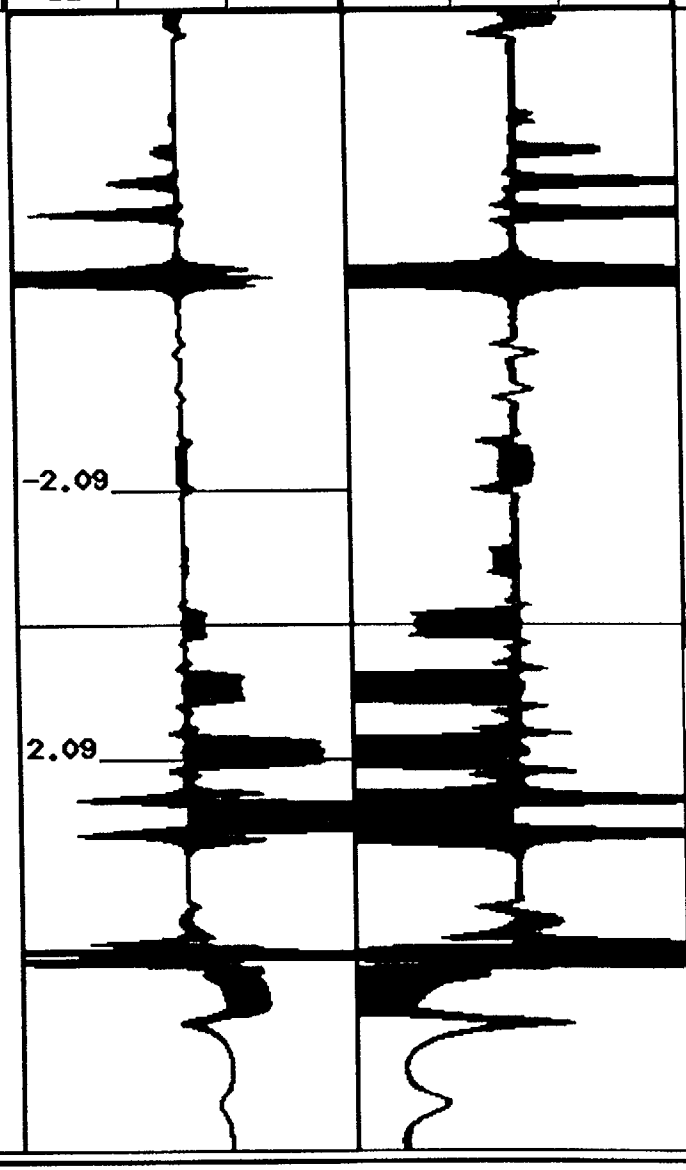
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

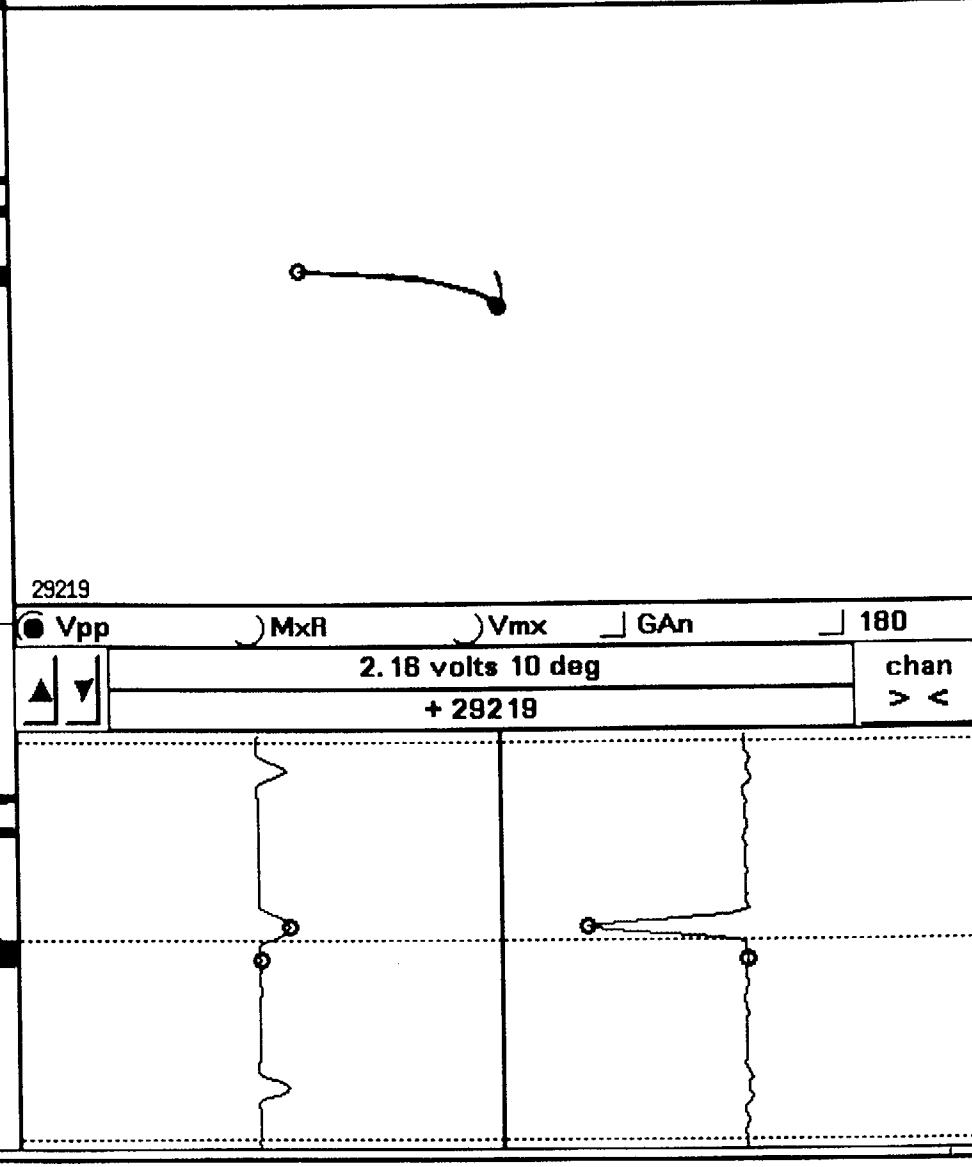
File Analysis System Tools Layout Add Displays Help

Tube Comment: | NOD | NBF | NBF | NAF | NAF

SG12HCAL00042 FRI 3:44:56 JAN-26-2001 SG 12 ROW 999 COL 999 1007

< Lmrks >	2	300	+AX	P2	300	+CIRC	2:	300	G2	C1	+AX
Clear	G2	C1	Vert	G2	C1	Vert	0.64 v/d		span 76		rot 224





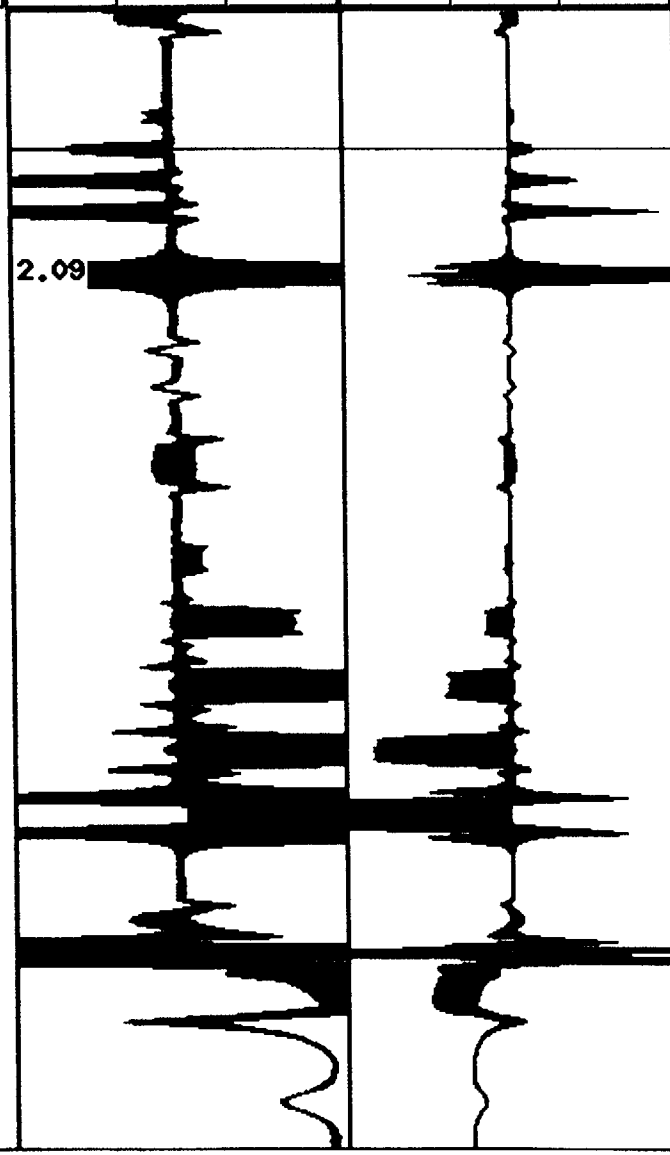
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

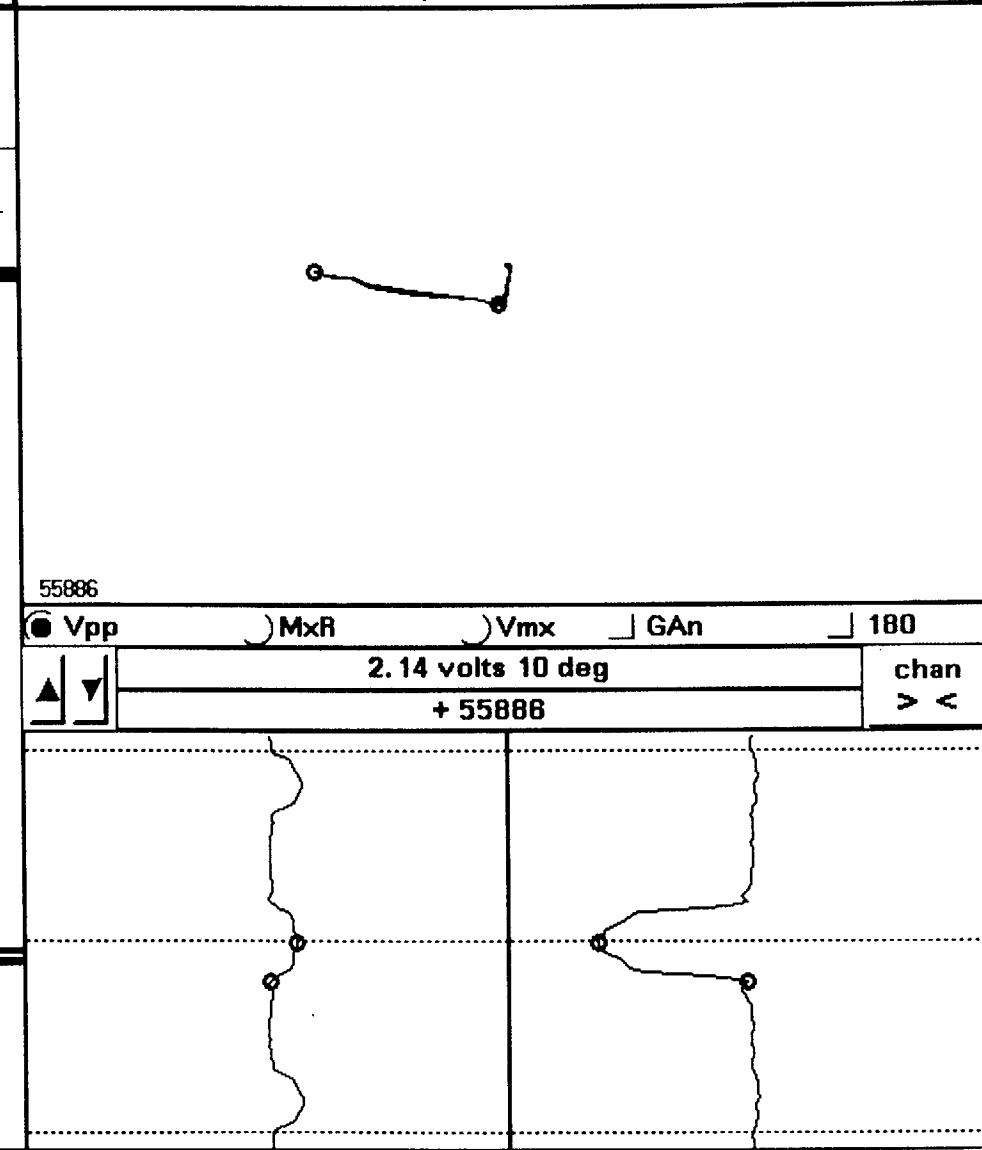
File Analysis System Tools Layout Add Displays Help

Tube Comment: | NOD | NBF | NBF | NAF | NAF

SG12HCAL00042 FRI 3:44:56 JAN-26-2001 SG 12 ROW 999 COL 999 1007

< Lmrks >	2	300	+AX	P2	300	+CIRC	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.68 v/d		span 78		rot 46





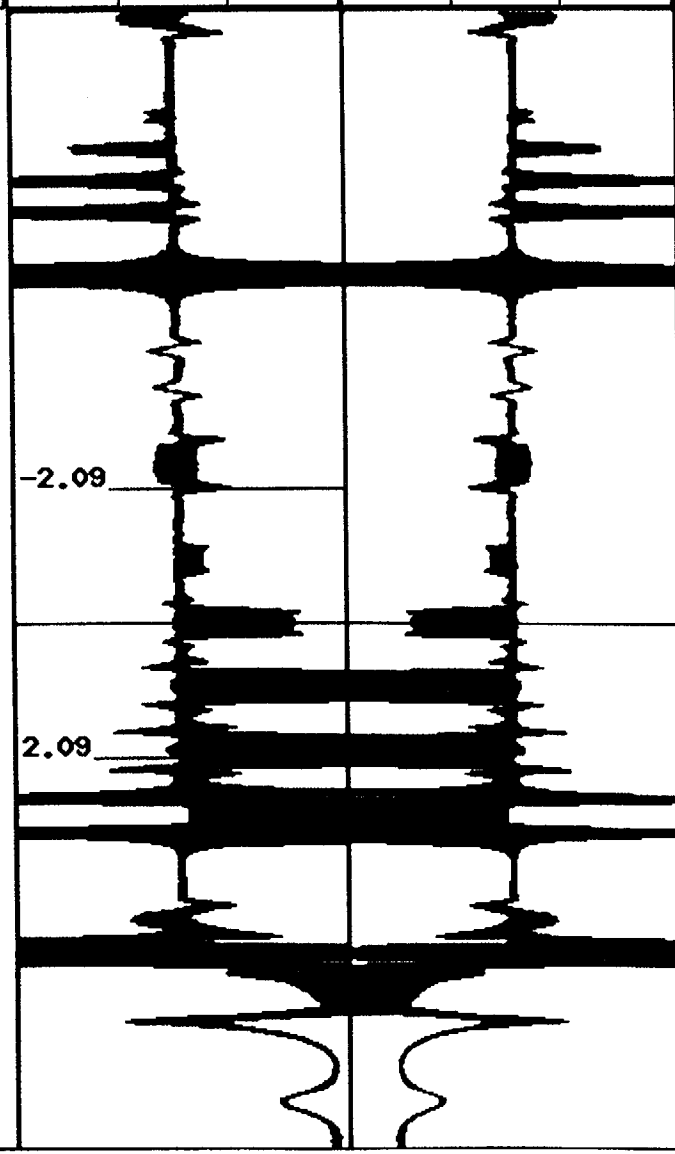
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

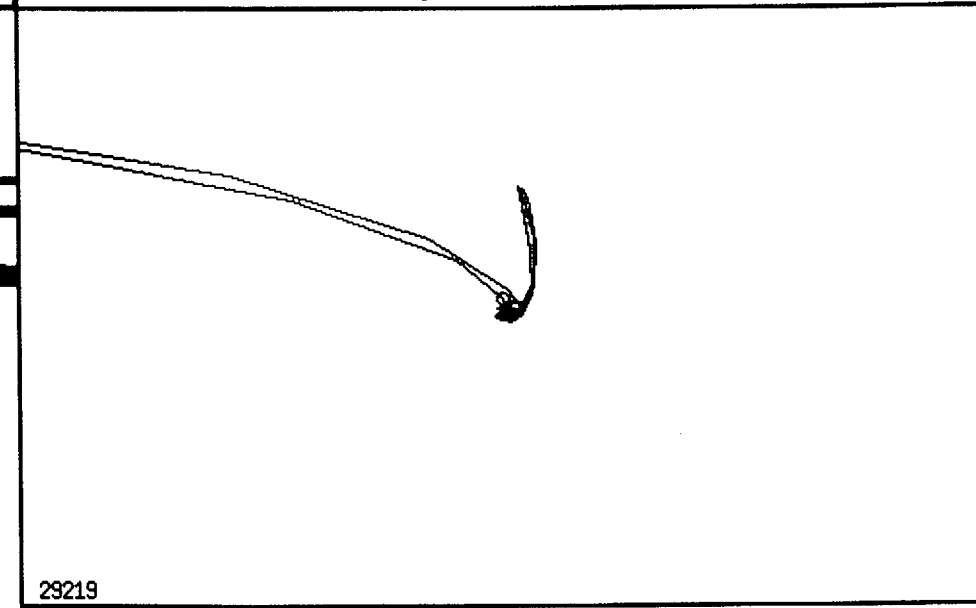
File Analysis System Tools Layout Add Displays Help

Tube Comment: | NOD | NBF | NBF | NAF | NAF

SG12HCAL00042 FRI 3:44:56 JAN-26-2001 SG 12 ROW 999 COL 999 I007

< Lmrks >	2	300	+AX	P2	300	+CIRC	2:	300	G2	C1	+AX
Clear	G2	C1	Vert	G2	C1	Vert	0.18 v/d		span 21		rot 229





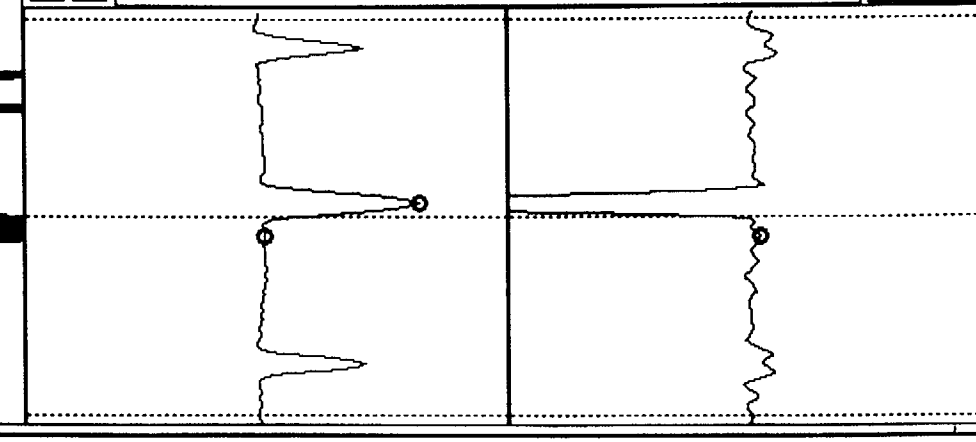
29219

Vpp MxR Vmx GAn 180

2.16 volts 15 deg

+ 29219

chan > <



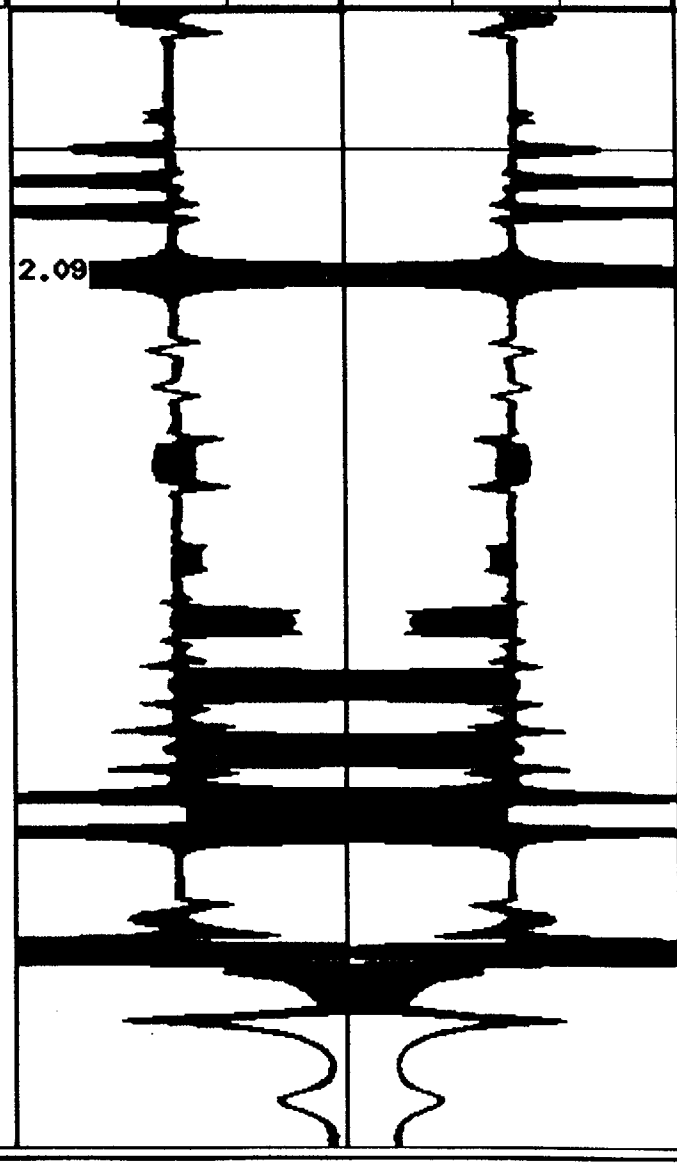
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

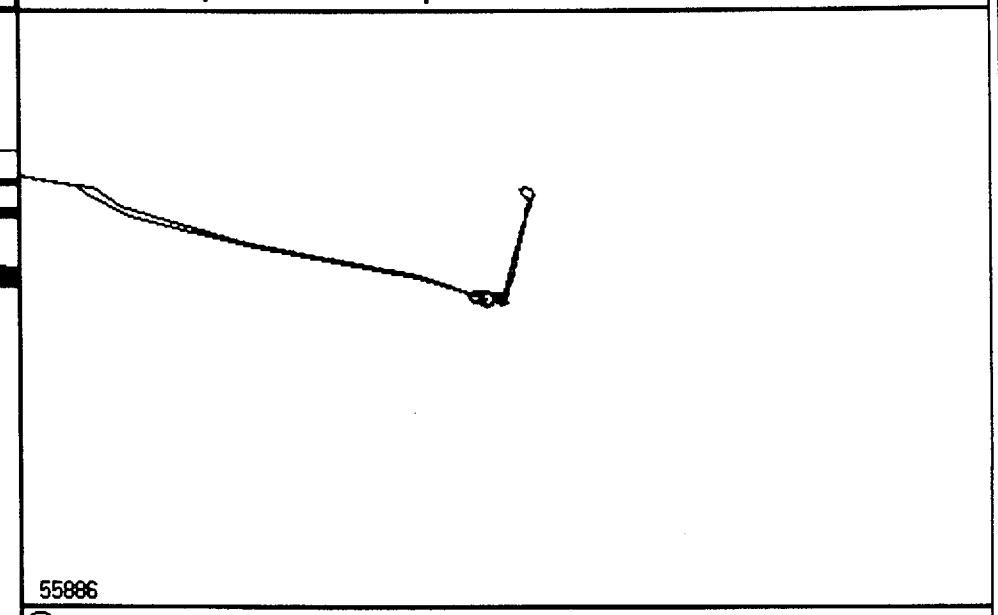
File Analysis System Tools Layout Add Displays Help

Tube Connect: NDD NBF NBF NAF NAF

SG12HCAL00042 FRI 3:44:56 JAN-26-2001 SG 12 ROW 999 COL 999 I007

< Lmrks >	2	300	+AX	P2	300	+CIRC	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.24 v/d		span 27		rot 51



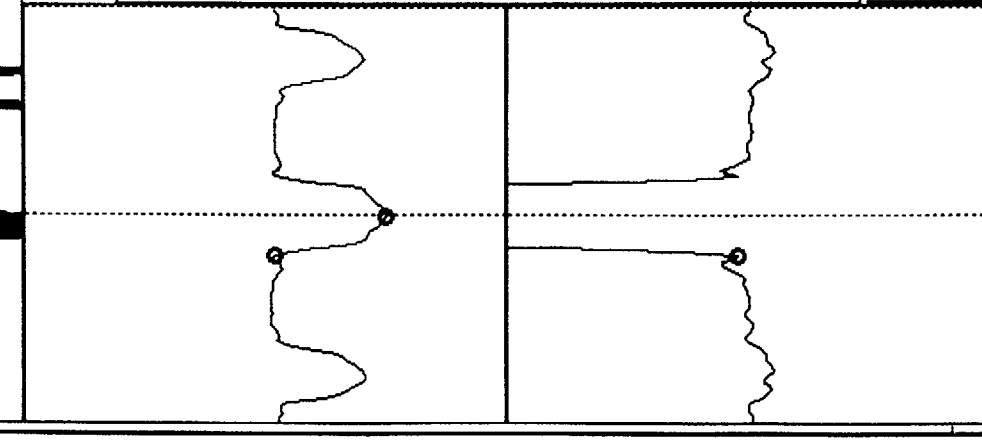


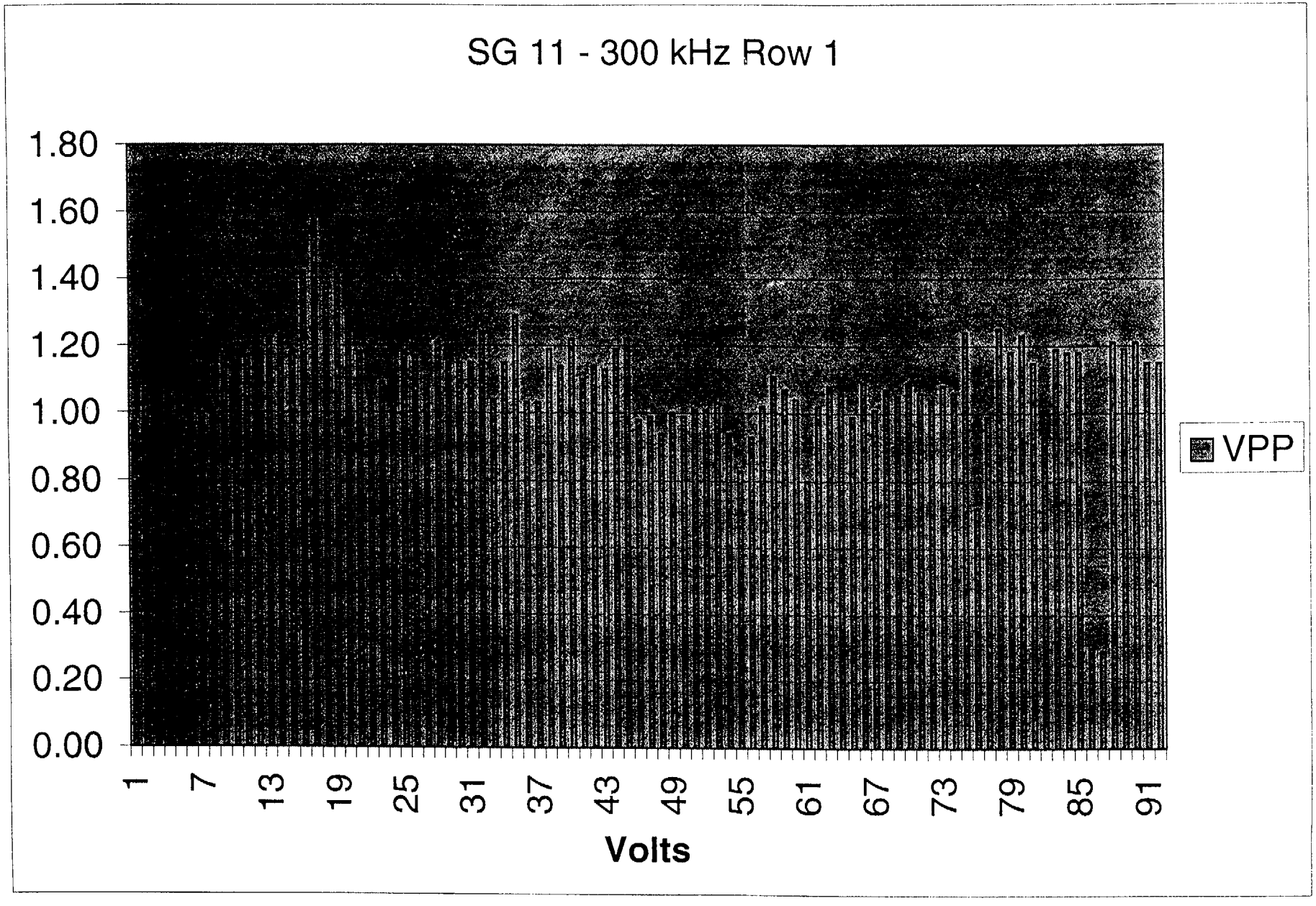
Vpp MxR Vmx GAn 180

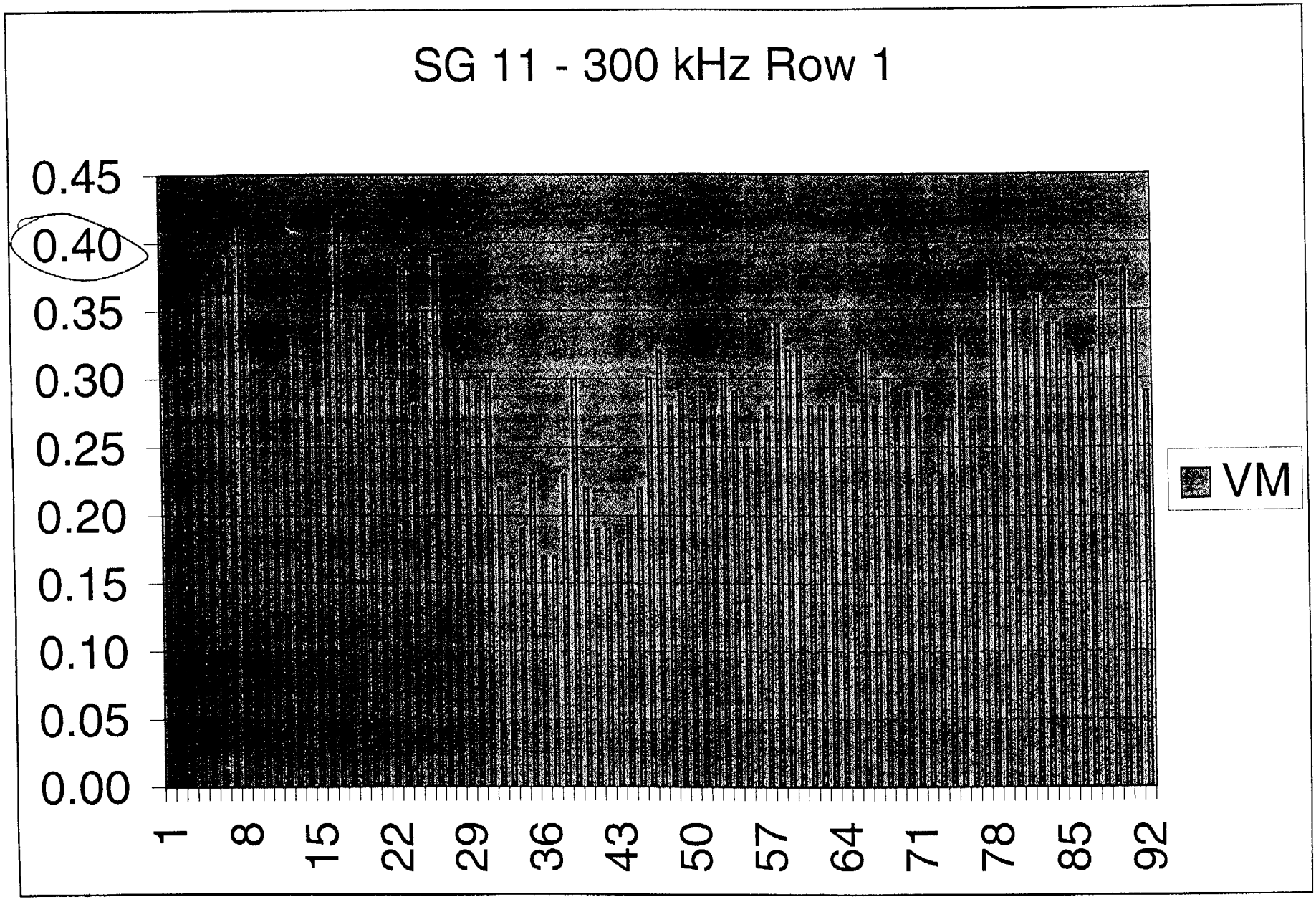
2.14 volts 15 deg

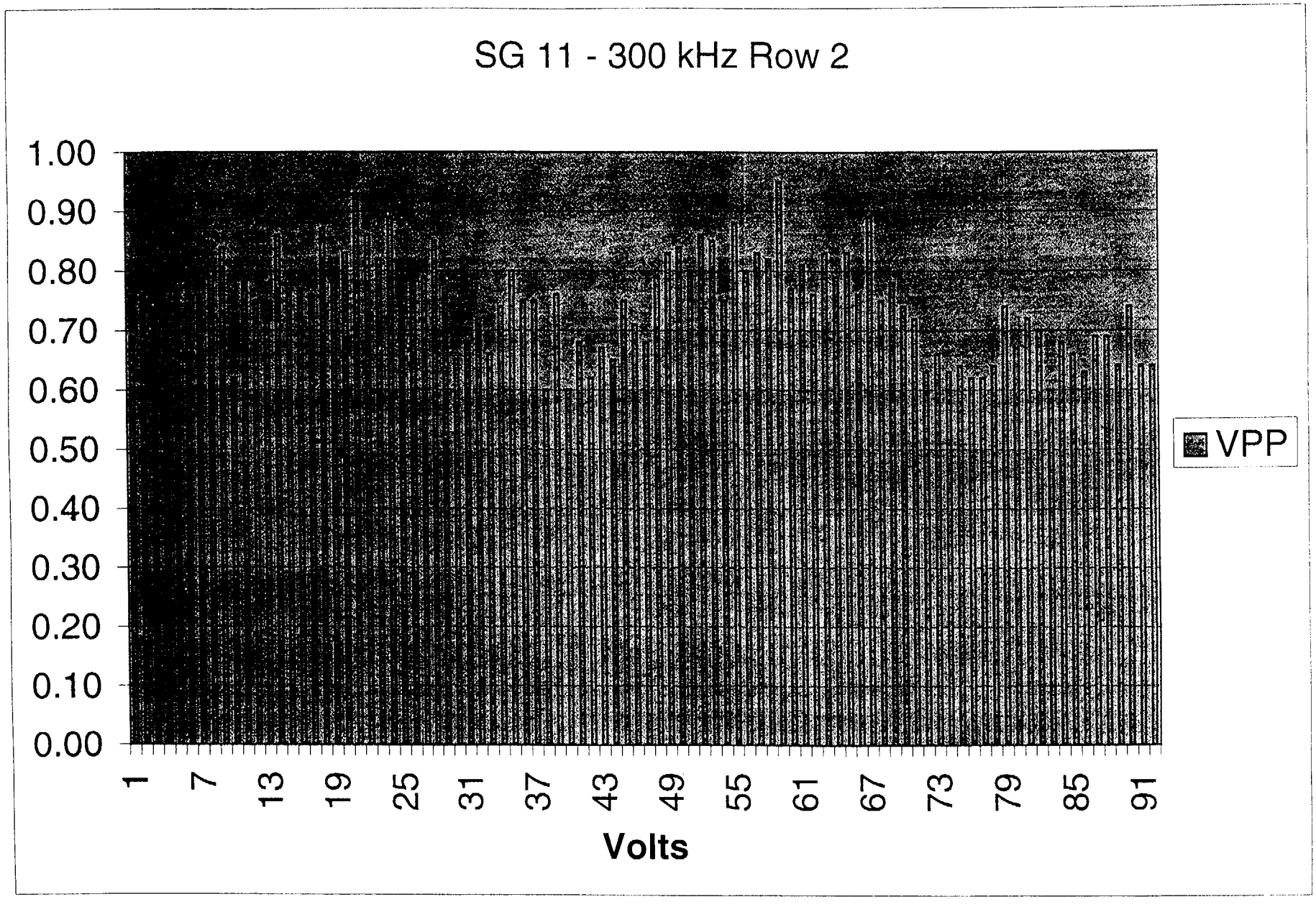
+ 55886

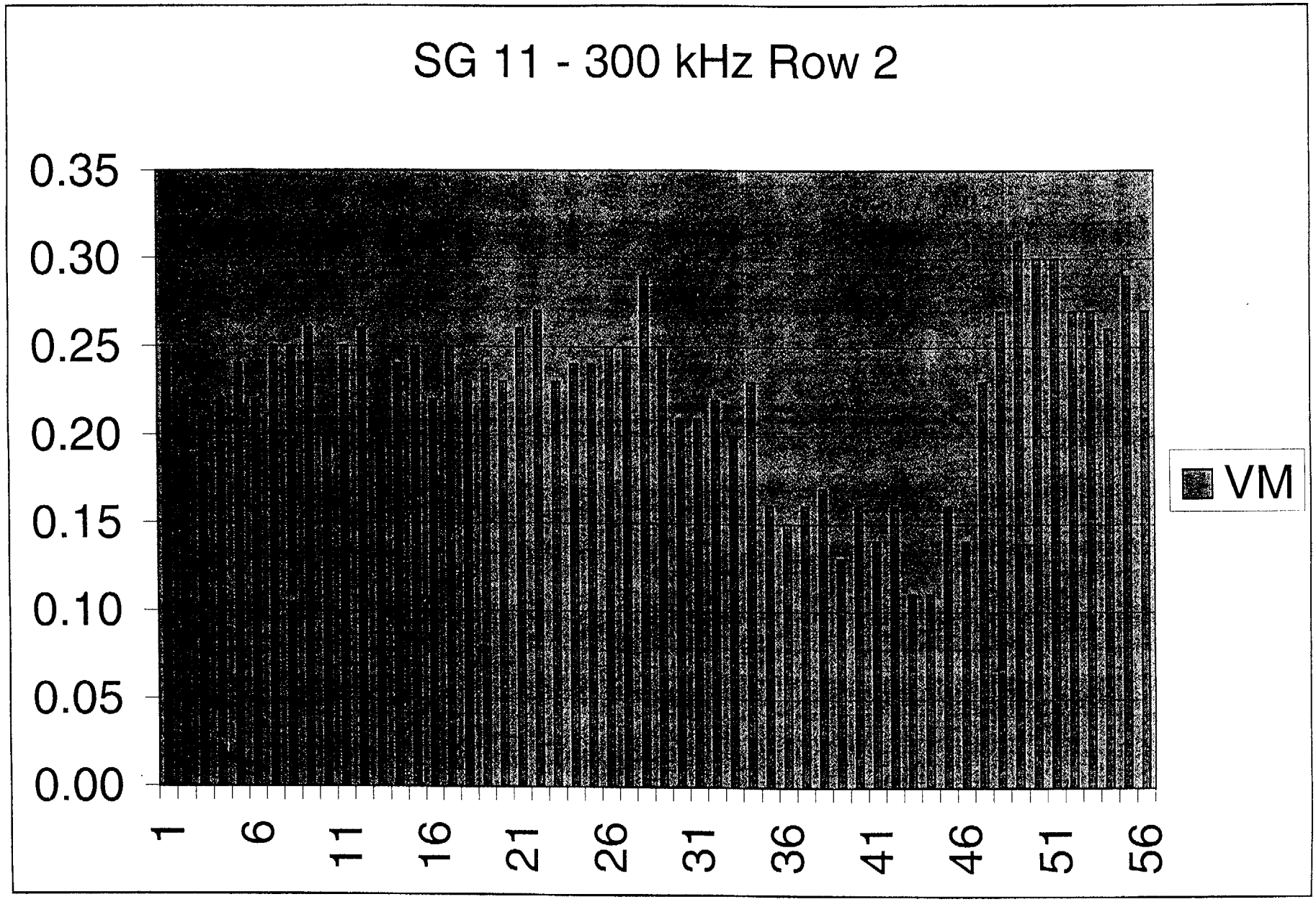
chan > <




SG 11 - 300 kHz Row 1
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
1
7
13
19
25
31
37
43
49
55
61
67
73
79
85
91
Volts
VPP


SG 11 - 300 kHz Row 1
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
1
8
15
22
29
36
43
50
57
64
71
78
85
92
VM


SG 11 - 300 kHz Row 2
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
1
7
13
19
25
31
37
43
49
55
61
67
73
79
85
91
Volts
VPP


SG 11 - 300 kHz Row 2
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
1
6
11
16
21
26
31
36
41
46
51
56
VM

ET GRAPHICS

nbf=noise before flaw
naf=noise after flaw
sci or mai=the flaw
nm=noise maximum
rms=noise measurement with signal to noise widget ± 2" from apex of bend.
apx=noisy tube measurements for max v-pp and max vmx.*
hf=high frequency
mr=midrange

*
SG 11 Row 1-Column 19 MR = noisiest v-pp and v-mx.

SG 11 Row 1-Column 20 HF = noisiest 600 kHz v-pp

SG11 Row 1-Column 65 HF = noisiest 600 kHz v-mx

I also measured the noise on row 1-column 19 with the HF probe.

NOISIEST TUBE
L V-PP
L

FILE: /mnt/server3_results/science/SG11HCAL00046 ANALYST: F3453 DATE: WED FEB. 7,2001 16:07
Disk Label= Unknown

11	1	19	1.56	16	APX	2	07H	+7.15	07C07H	VPP	F3453 science	DHR001C019I018	3
11	1	19	0.42	0	APX	2	07H	+7.15	07C07H	VMX	F3453 science	DHR001C019I018	4

R1 C19

Noisiest Tube

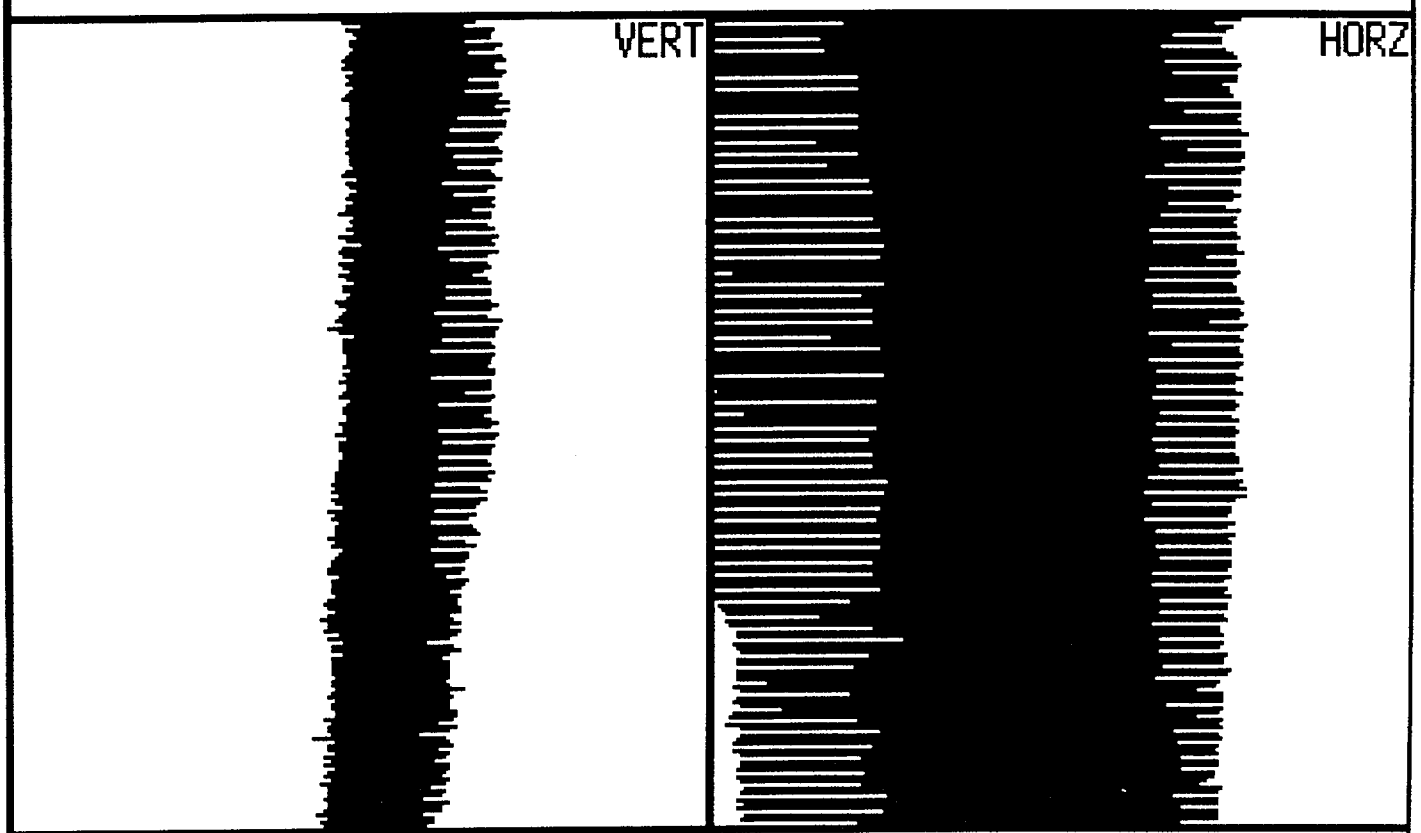
V_{pp} and V_{max}

Rejected

R1C19 MR

SNR WIDGET

NOISE ONLY | DIFF SIGNL | AXIAL FLAW | FIND SIGNAL END PTS | SET NOISE START | SET NOISE END



NOISE RMS

T: 0.32v

V: 0.09v

H: 0.30v

Total Data Pts: 15274

PLOT DATA | SHOW NOISE | DONE

Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

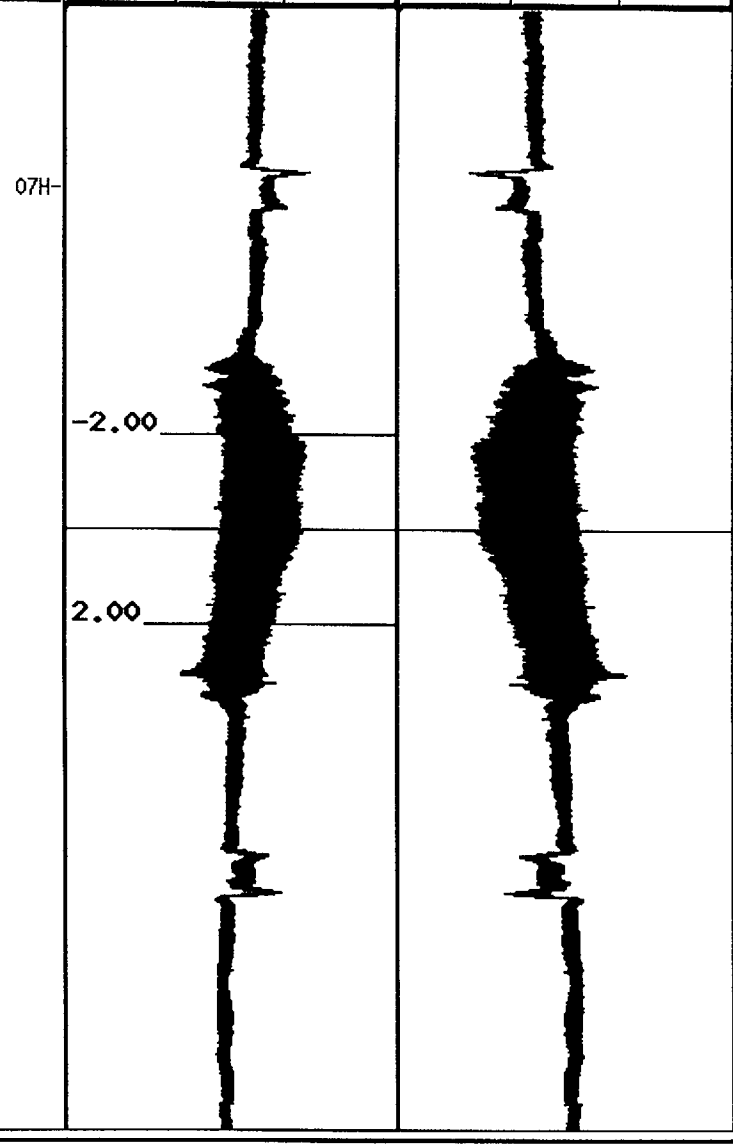
File Analysis System Tools Layout Add Displays Help

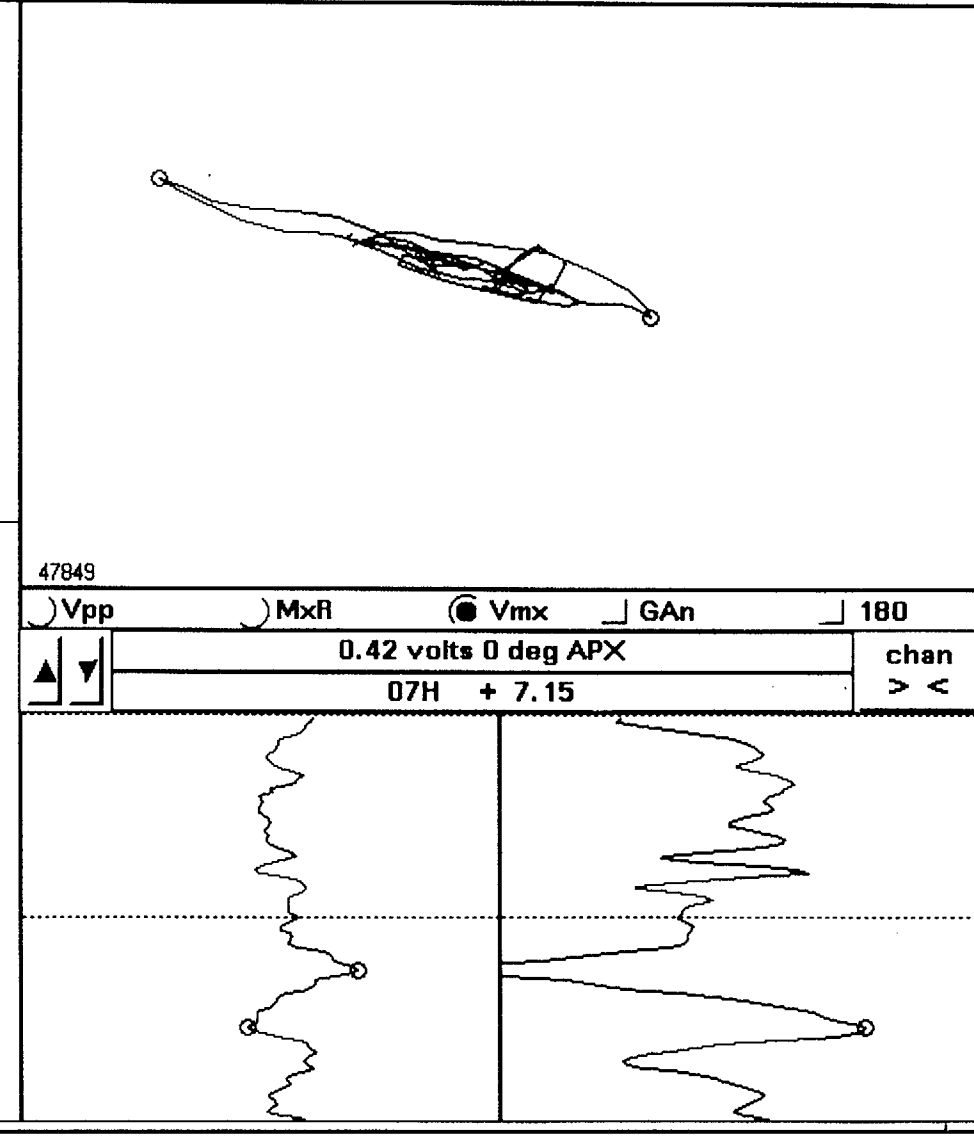
Tube Comment: 07H 18.6/07H -3.9 :Auto

NDD	NBF	NBF	NAF	NAF

SG11HCAL00046 SAT 0:35:14 JAN-27-2001 SG 11 ROW 1 COL 19 I018

< Lmrks >	2	300	+AX	P2	300	+CIRC	2:	300	G2	C1	+AX
Clear	G2	C1	Vert	G2	C1	Vert	0.18 v/d		span 21		rot 231





SG11HCAL

File Layout

Null Dat

2	300	+AX
G2	C1	Vert

-2.00

2.00

AXIAL LIZ

SET VOLT UNITS | SET CAL CURVES

Vpp | MxR | Vmx | GA | 180

07H + 7.15

CIRC LIZ

SET VOLT UNITS | SET CAL CURVES

Vpp | MxR | Vmx | GA | 180

07H + 7.15

RPC: SG11HCAL00046SAT 0:35:14 JAN-27-2001 SG 11 R 1 C 19 I018 [MB]

Filter:OFF Pts/Scan=95 XTrans=4 YTrans=0 XRot=60 ZRot=40

SHOW HIDDEN OFF | MAGNIFY OFF | HORZ PLOT OFF | CROSSHATCH OFF | 07H 18.6/07H -3.9 :Auto

0

120

0

109.9

240 120 0

CIRC NO MEAS

AXIAL NO MEAS

07H + 7.15

< CHAN >
2: 300 G1 C1 +AX

CSCAN <PLOT>	180 PLOT
CHAN (+/-)	USER SELECT
SCAN (+/-)	SCAN +/-85%
XSCALE = 2.0	YSCALE = 2.0
SCANS =161	T-OFST =80
SPAN =21	R-SLEW ON
CIRC FROM	CIRC TO
AXIAL FROM	AXIAL TO

R1 C19 HF 1-29HF

SNR WIDGET

NOISE ONLY | DIFF SIGNL | AXIAL FLAW | FIND SIGNAL END PTS | SET NOISE START | SET NOISE END

VERT

HORZ

NOISE RMS

T: 0.16v

V: 0.07v

H: 0.14v

Total Data Pts: 13633

PLOT DATA | SHOW NOISE | DONE

6

SG11HCAL

File Layout

Null Dat

2	600	HF+AX
G2	C1	Vert

-1.20

1.20

AXIAL LIZ

SET VOLT UNITS | SET CAL CURVES

Vpp | MxR | Vmx | GA | 180

07H + 7.15

CIRC LIZ

SET VOLT UNITS | SET CAL CURVES

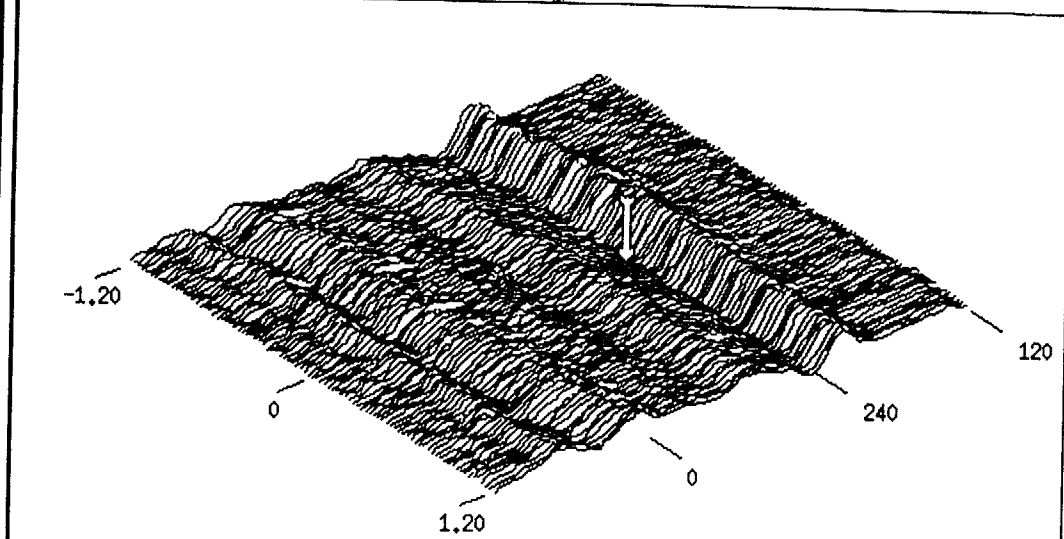
Vpp | MxR | Vmx | GA | 180

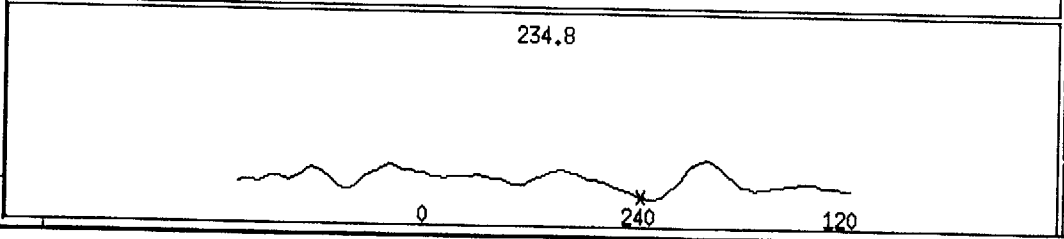
07H + 7.15

RPC: SG11HCAL00057SAT 13:14:22 JAN-27-2001 SG 11 R 1 C 19 1026 [MB]

Filter:OFF Pts/Scan=92 XTrans=4 YTrans=0 XRot=60 ZRot=40

SHOW HIDDEN OFF | MAGNIFY OFF | HORZ PLOT OFF | CROSSHATCH OFF





CIRC NO MEAS

AXIAL NO MEAS

07H + 7.15

< CHAN >
2: 600 G2 C1 HF+AX

CSCAN <PLOT>	180 PLOT
CHAN (+/-)	USER SELECT
SCAN (+/-)	SCAN +/-85%
XSCALE = 2.0	YSCALE = 2.0
SCANS =89	T-OFST =29
SPAN =51	R-SLEW ON
CIRC FROM	CIRC TO
AXIAL FROM	AXIAL TO

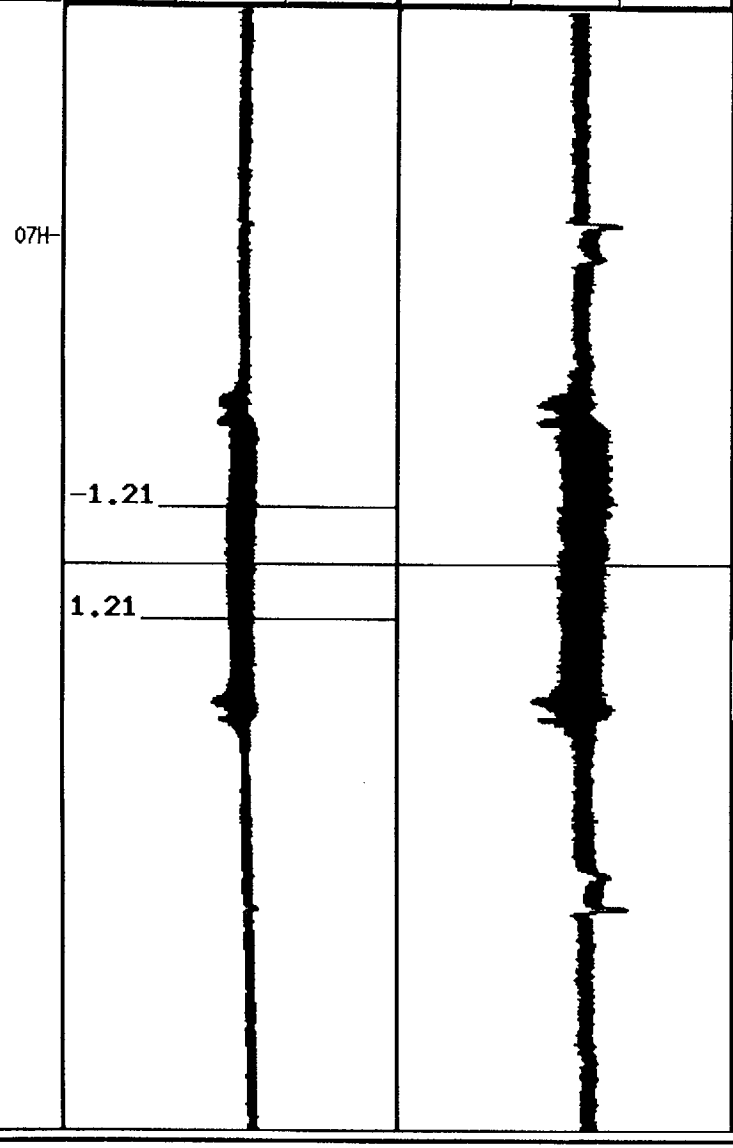
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

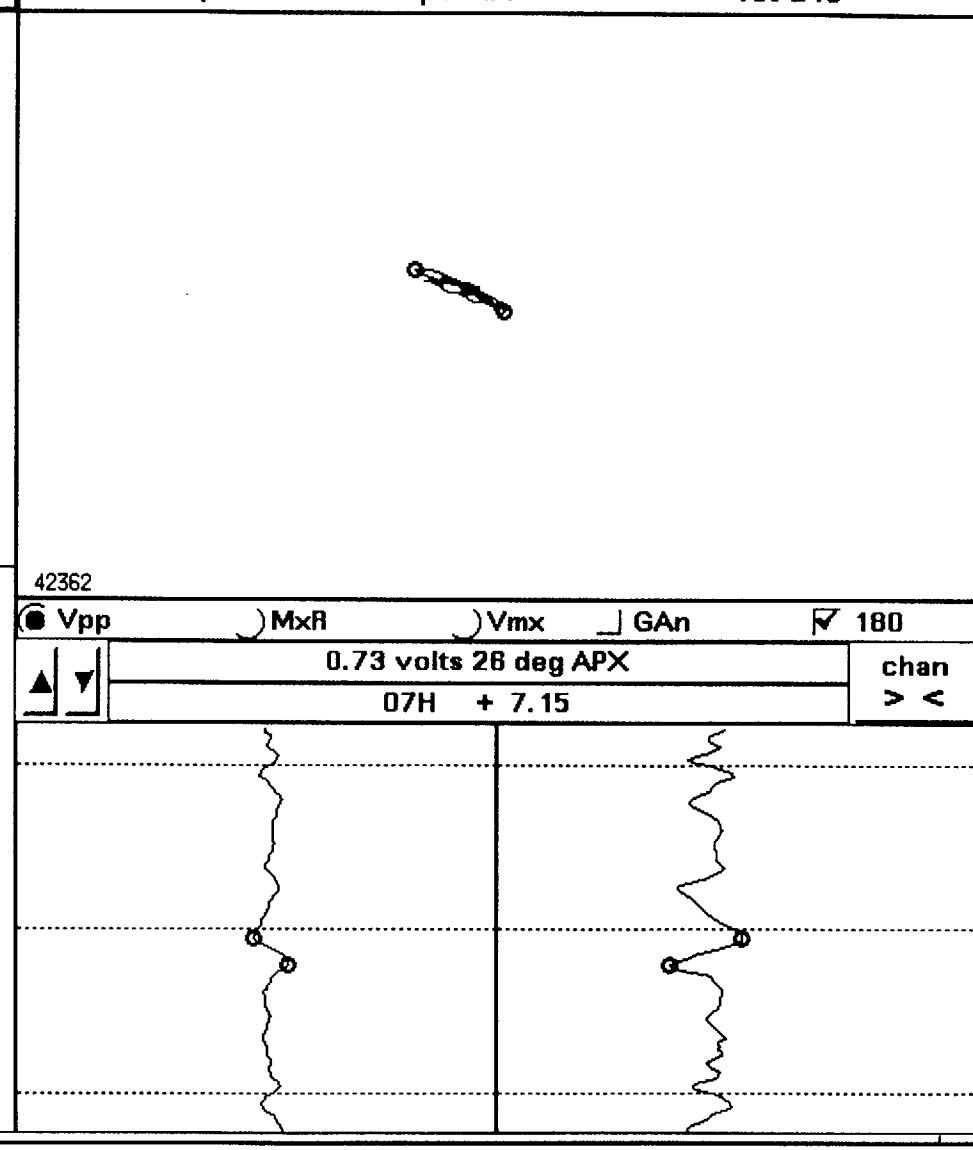
File Analysis System Tools Layout Add Displays Help

Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG11HCAL00057 SAT 13:14:22 JAN-27-2001 SG 11 ROW 1 COL 19 I026

< Lmrks >	2	600	HF+AX	4	300	HF+AX	2:	600	G2	C1	HF+AX
Clear	G2	C1	Vert	G2	C1	Vert	0.44 v/d		span 51		rot 215





HT Fuze
NOISIEST VPP

FILE: /mnt/server3_results/science/SG11HCAL00057 ANALYST: F3453 DATE: WED FEB. 7,2001 16:23

Disk Label= Unknown

11	1	19	0.73	26	APX	2 07H	+7.15	07C07H	VPP	F3453 science	DHR001C019I026	0
11	1	19	0.31	0	APX	2 07H	+7.15	07C07H	VMX	F3453 science	DHR001C019I026	1
11	1	20	0.79	25	APX	2 07H	+6.53	07C07H	VPP	F3453 science	DHR001C020I027	2
11	1	20	0.33	0	APX	2 07H	+6.53	07C07H	VMX	F3453 science	DHR001C020I027	3

R1 C20

NOSIEST HIGH FREQ

V_{PP}

1-20 HF

R1 C20

SNR WIDGET

NOISE ONLY | DIFF SIGNL | AXIAL FLAW | FIND SIGNAL END PTS | SET NOISE START | SET NOISE END

VERT

HORZ

NOISE RMS

T: 0.15v

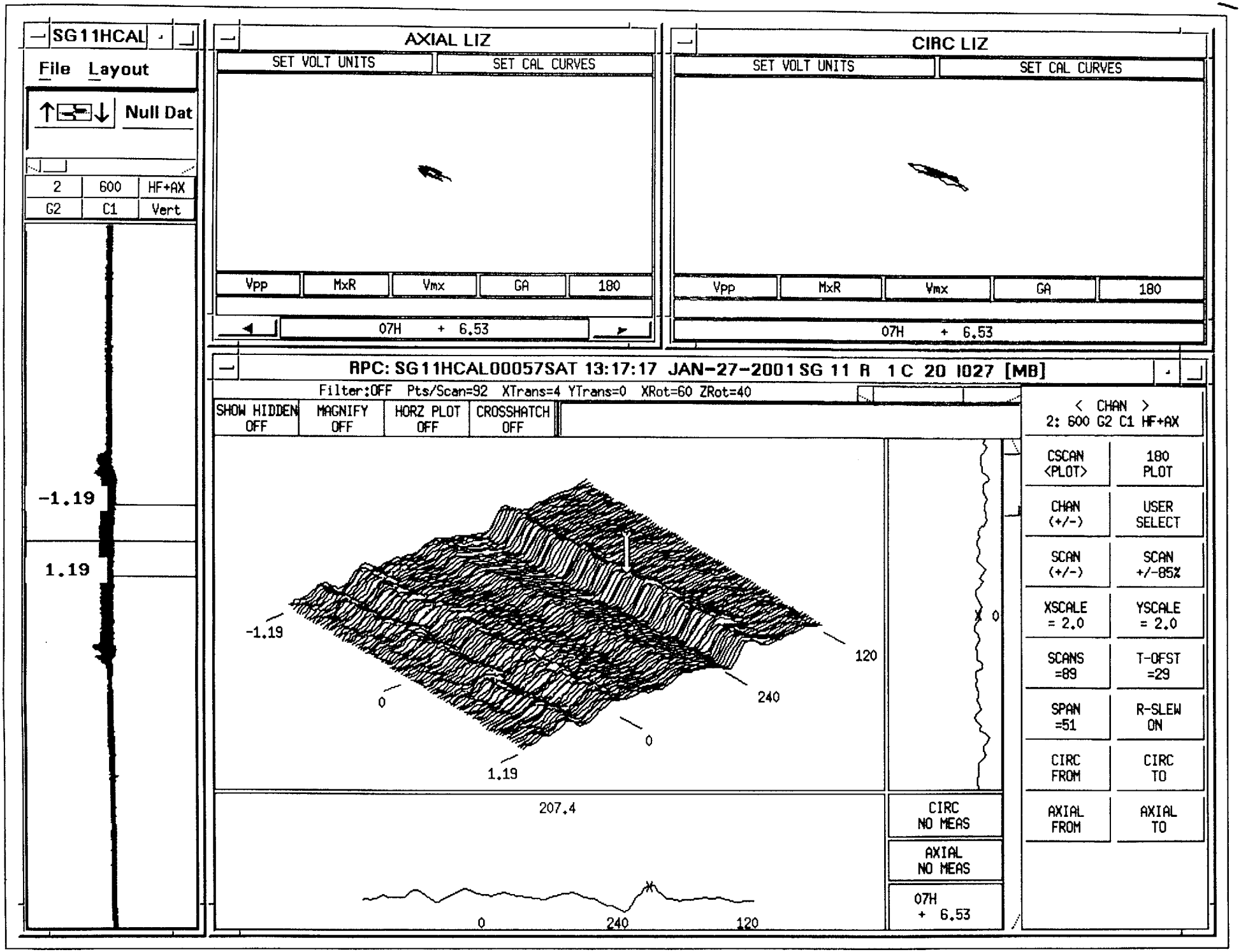
V: 0.06v

H: 0.14v

Total Data Pts: 13721

PLOT DATA | SHOW NOISE | DONE

10


SG11HCAL
File Layout
Null Dat
2 600 HF+AX
G2 C1 Vert
-1.19
1.19
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 6.53
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 6.53
RPC: SG11HCAL00057SAT 13:17:17 JAN-27-2001 SG 11 R 1 C 20 1027 [MB]
Filter:OFF Pts/Scan=92 XTrans=4 YTrans=0 XRot=60 ZRot=40
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
-1.19
0
1.19
120
240
0
207.4
0
240
120
CIRC NO MEAS
AXIAL NO MEAS
07H + 6.53
< CHAN >
2: 600 G2 C1 HF+AX
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =89
T-OFST =29
SPAN =51
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

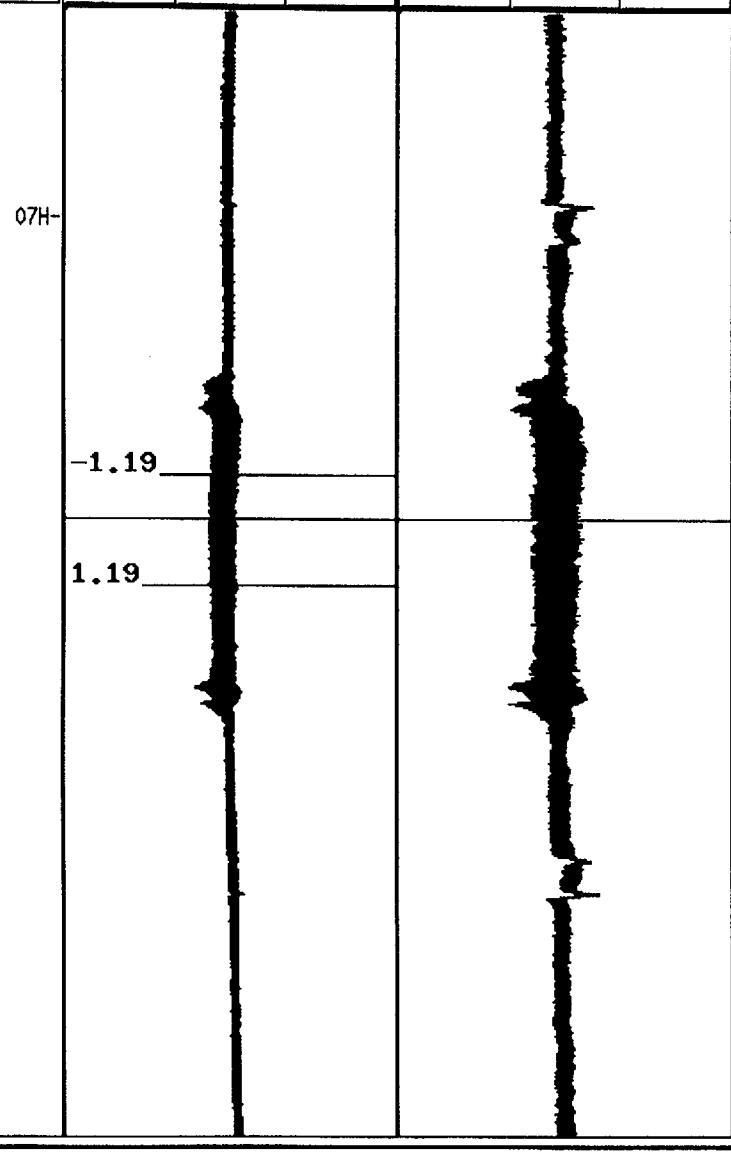
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

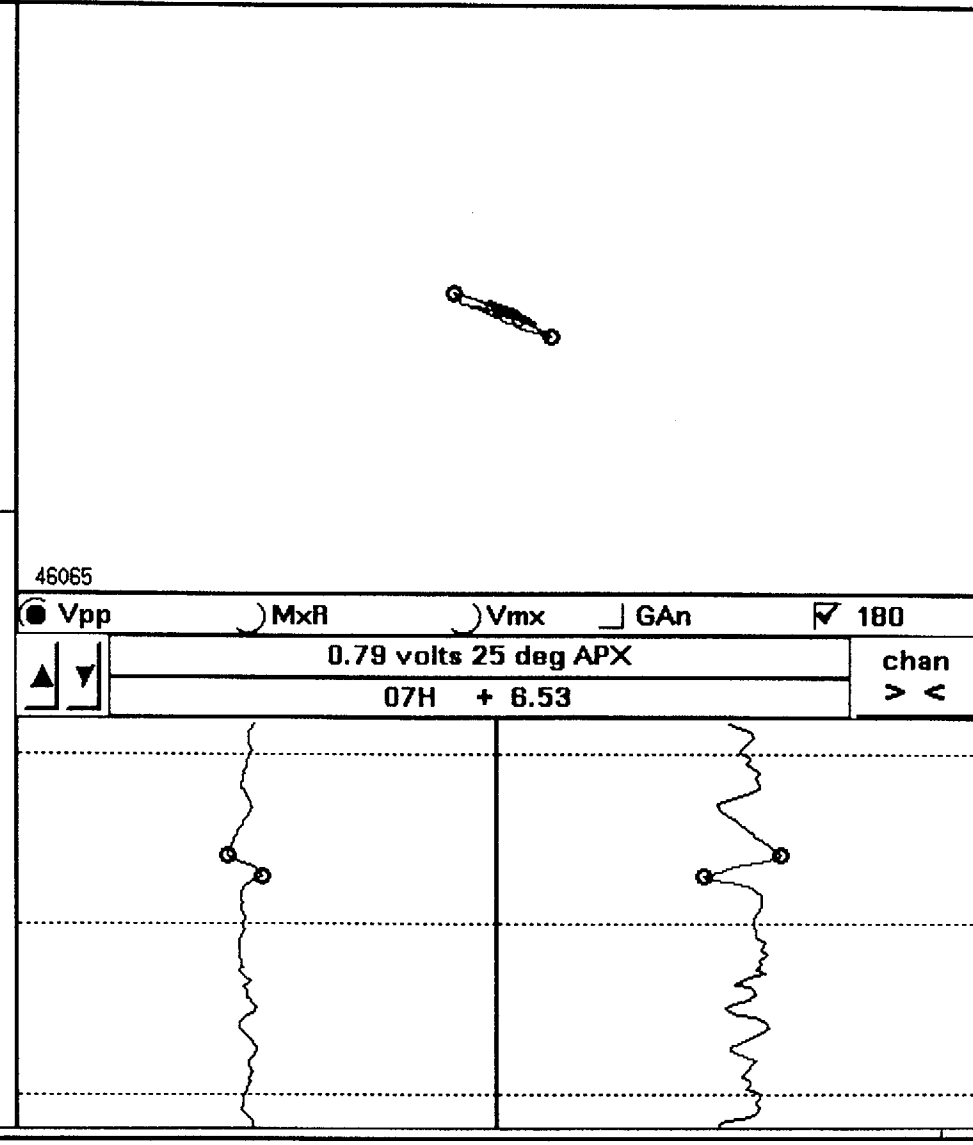
File Analysis System Tools Layout Add Displays Help

Tube Comment: NDD NBF NBF NAF NAF

SG11HCAL00057 SAT 13:17:17 JAN-27-2001 SG 11 ROW 1 COL 20 1027

< Lmrks >	2	600	HF+AX	4	300	HF+AX	2:	600	G2	C1	HF+AX
Clear	G2	C1	Vert	G2	C1	Vert	0.44 v/d		span 51		rot 215





Nosiest Vmx

```
FILE: /mnt/server3_results/science/SG11HCAL00056  ANALYST: F3453  DATE: WED FEB.  7,2001 16:47          L
Disk Label= Unknown                                                                                      L
 11   1  65  0.75  28 APX   2 07H     +7.15          07C07H   VPP              F3453 science        DHR001C065I016   0
 11   1  65  0.40   0 APX   2 07H     +7.15          07C07H   VMX              F3453 science        DHR001C065I016   1
```

R1 C65

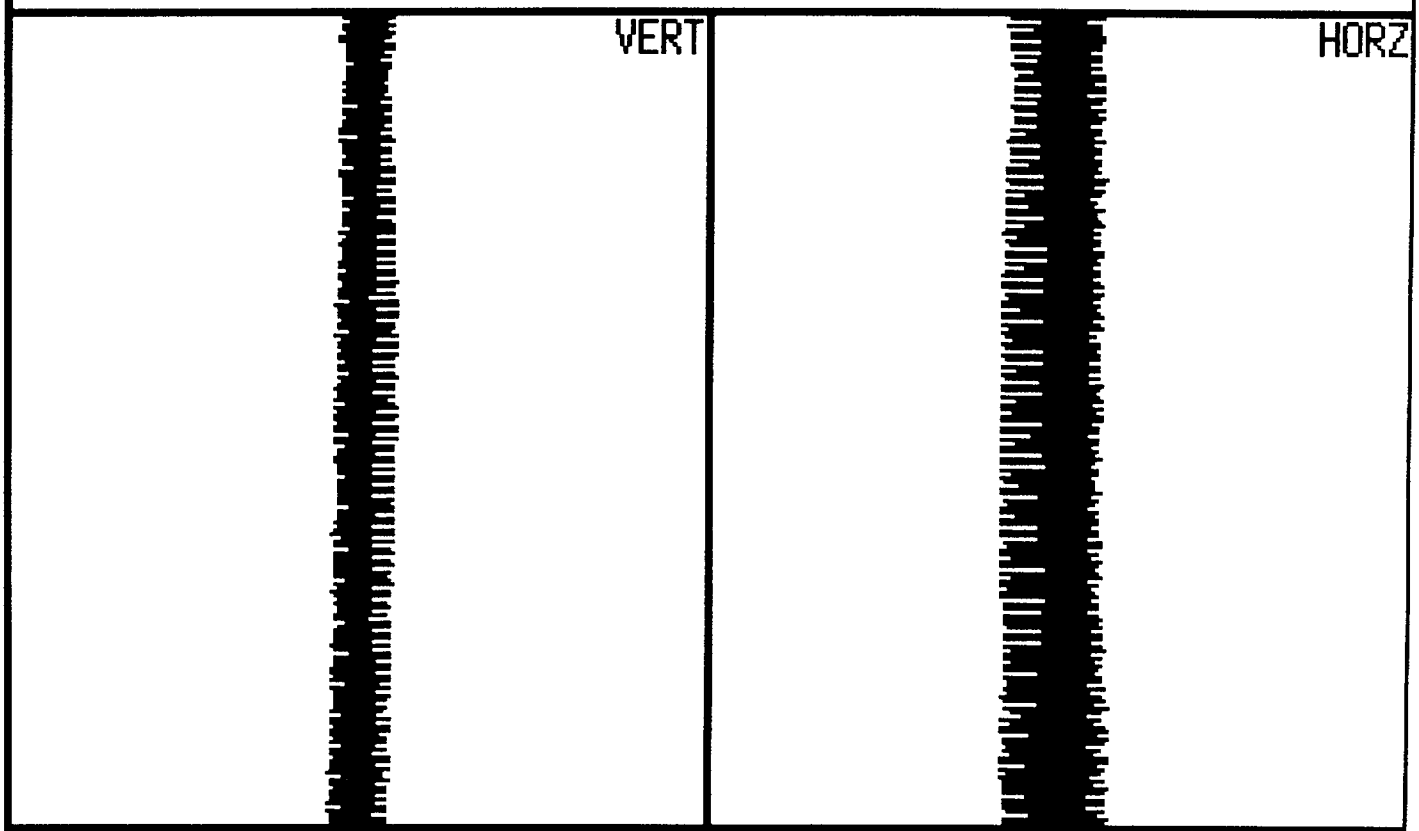
Nosiest Hf

V_{mx}

R1C65

SNR WIDGET

NOISE ONLY	DIFF SIGNL	AXIAL FLAW	FIND SIGNAL END PTS	SET NOISE START	SET NOISE END



NOISE
RMS

T: 0.15v

V: 0.08v

H: 0.13v

Total Data Pts: 12799

PLOT DATA	SHOW NOISE	DONE

SG11HCAL

File Layout

Null Dat

2	600	HF+AX
G2	C1	Vert

-1.28

1.28

AXIAL LIZ

SET VOLT UNITS | SET CAL CURVES

Vpp | MxR | Vmx | GA | 180

07H + 7.15

CIRC LIZ

SET VOLT UNITS | SET CAL CURVES

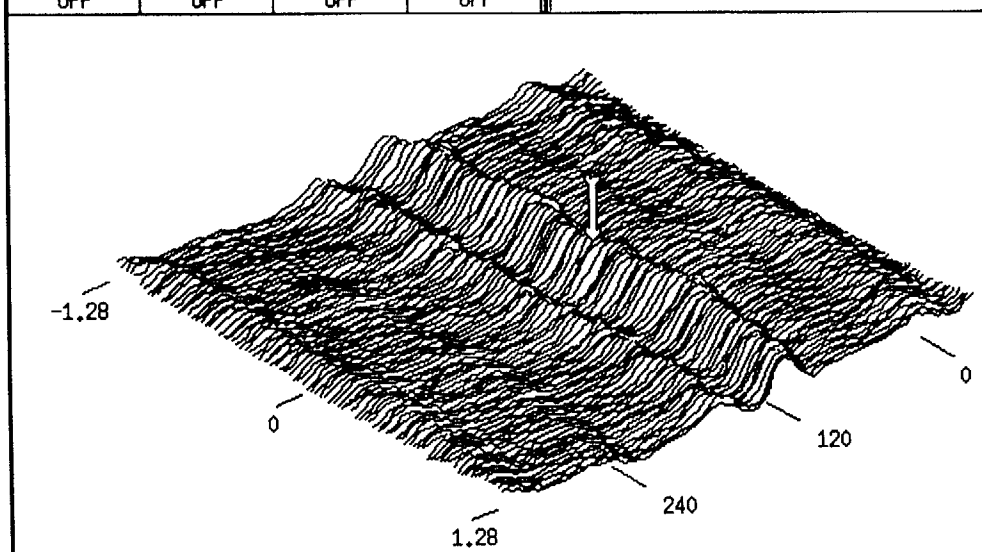
Vpp | MxR | Vmx | GA | 180

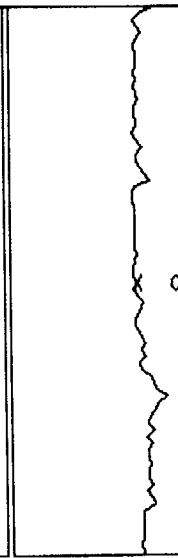
07H + 7.15

RPC: SG11HCAL00056SAT 11:46:20 JAN-27-2001 SG 11 R 1 C 65 1016 [MB]

Filter:OFF Pts/Scan=92 XTrans=4 YTrans=0 XRot=60 ZRot=40

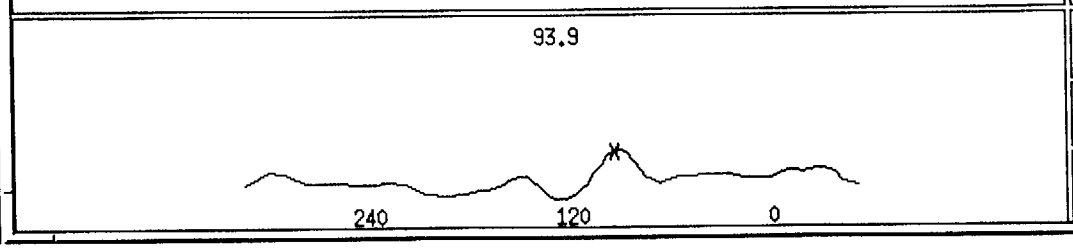
SHOW HIDDEN OFF | MAGNIFY OFF | HORZ PLOT OFF | CROSSHATCH OFF





< CHAN >
2: 600 G2 C1 HF+AX

CSCAN <PLOT>	180 PLOT
CHAN (+/-)	USER SELECT
SCAN (+/-)	SCAN +/-85%
XSCALE = 2.0	YSCALE = 2.0
SCANS =89	T-OFST =80
SPAN =51	R-SLEW ON
CIRC FROM	CIRC TO
AXIAL FROM	AXIAL TO



CIRC NO MEAS

AXIAL NO MEAS

07H + 7.15

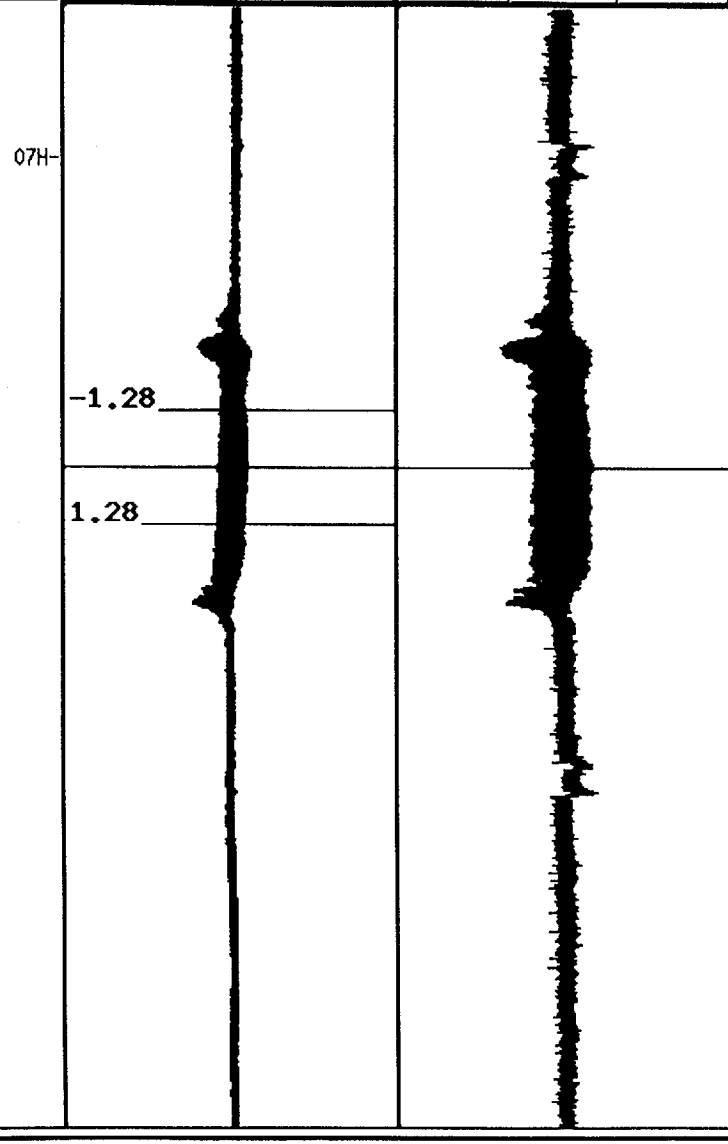
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

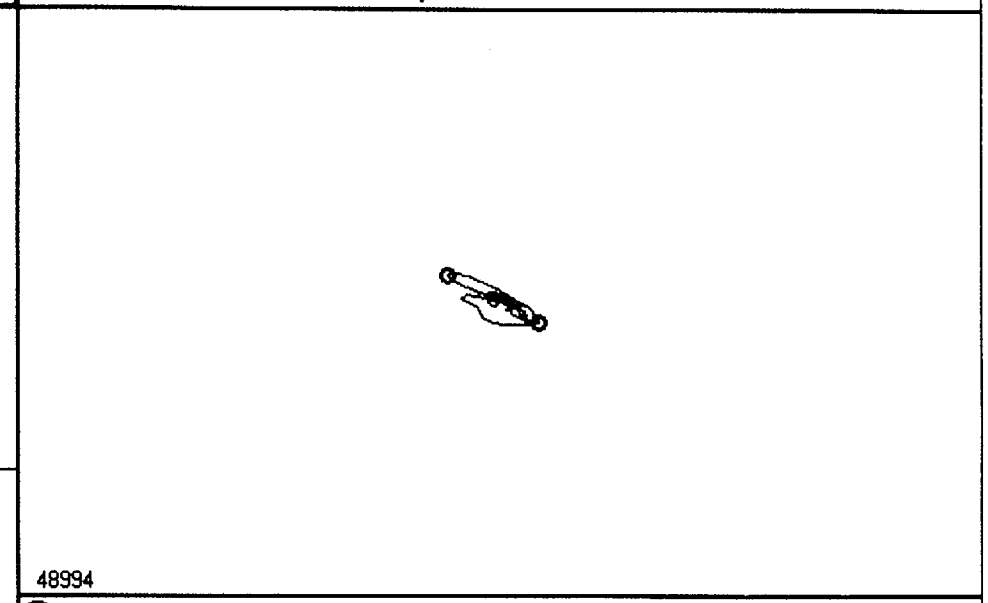
File Analysis System Tools Layout Add Displays Help

Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG11HCAL00056 SAT 11:46:20 JAN-27-2001 SG 11 ROW 1 COL 65 I016

< Lmrks >	2	600	HF+AX	4	300	HF+AX	2:	600	G2	C1	HF+AX
Clear	G2	C1	Vert	G2	C1	Vert	0.44 v/d		span 51		rot 216



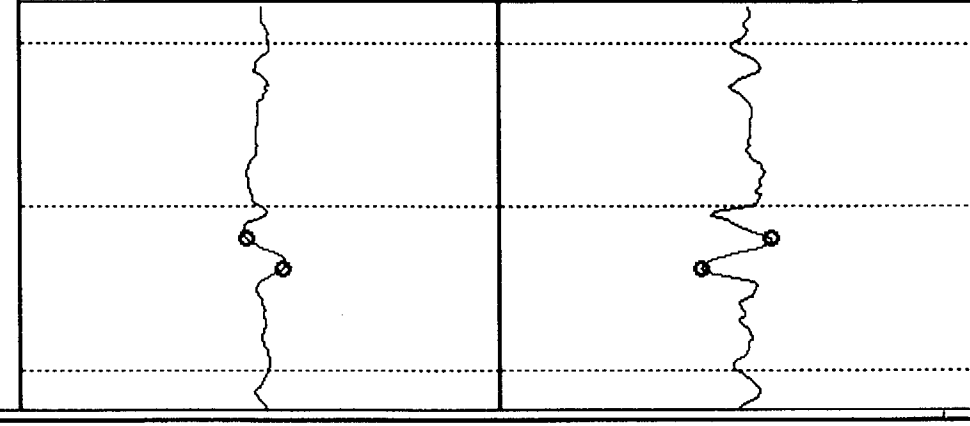


Vpp MxR Vmx GAn 180

0.75 volts 28 deg APX

07H + 7.15

chan > <



16

PRE

FILE: /mnt/server3_results/science/SG12HCAL00042 ANALYST: F3453 DATE: WED FEB. 7,2001 11:44 L INSITU

Disk Label= Unknown L MR

12	1	52	0.94	13	NBF	P 2 07H	+8.12	07C07H	VPP	F3453	science	DHR001C052I021	9
12	1	52	0.22	0	NBF	P 2 07H	+8.12	07C07H	VM	F3453	science	DHR001C052I021	10
12	1	52	1.59	20	SCI	P 2 07H	+7.91	07C07H	VPP	F3453	science	DHR001C052I021	11
12	1	52	0.54	0	SCI	P 2 07H	+7.91	07C07H	VMX	F3453	science	DHR001C052I021	12
12	1	52	0.65	7	NAF	P 2 07H	+7.60	07C07H	VPP	F3453	science	DHR001C052I021	13
12	1	52	0.17	0	NAF	P 2 07H	+7.60	07C07H	VM	F3453	science	DHR001C052I021	14
12	1	52	0.65	7	NBF	P 2 07H	+7.60	07C07H	VPP	F3453	science	DHR001C052I021	15
12	1	52	0.17	0	NBF	P 2 07H	+7.60	07C07H	VM	F3453	science	DHR001C052I021	16
12	1	52	1.36	17	SCI	P 2 07H	+7.43	07C07H	VPP	F3453	science	DHR001C052I021	17
12	1	52	0.40	0	SCI	P 2 07H	+7.43	07C07H	VMX	F3453	science	DHR001C052I021	18
12	1	52	0.66	15	NAF	P 2 07H	+7.15	07C07H	VPP	F3453	science	DHR001C052I021	19
12	1	52	0.18	0	NAF	P 2 07H	+7.15	07C07H	VM	F3453	science	DHR001C052I021	20
12	1	52	1.15	15	NM	P 2 07H	+8.20	07C07H	VPP	F3453	science	DHR001C052I021	21
12	1	52	0.30	0	NM	P 2 07H	+8.20	07C07H	VMX	F3453	science	DHR001C052I021	22

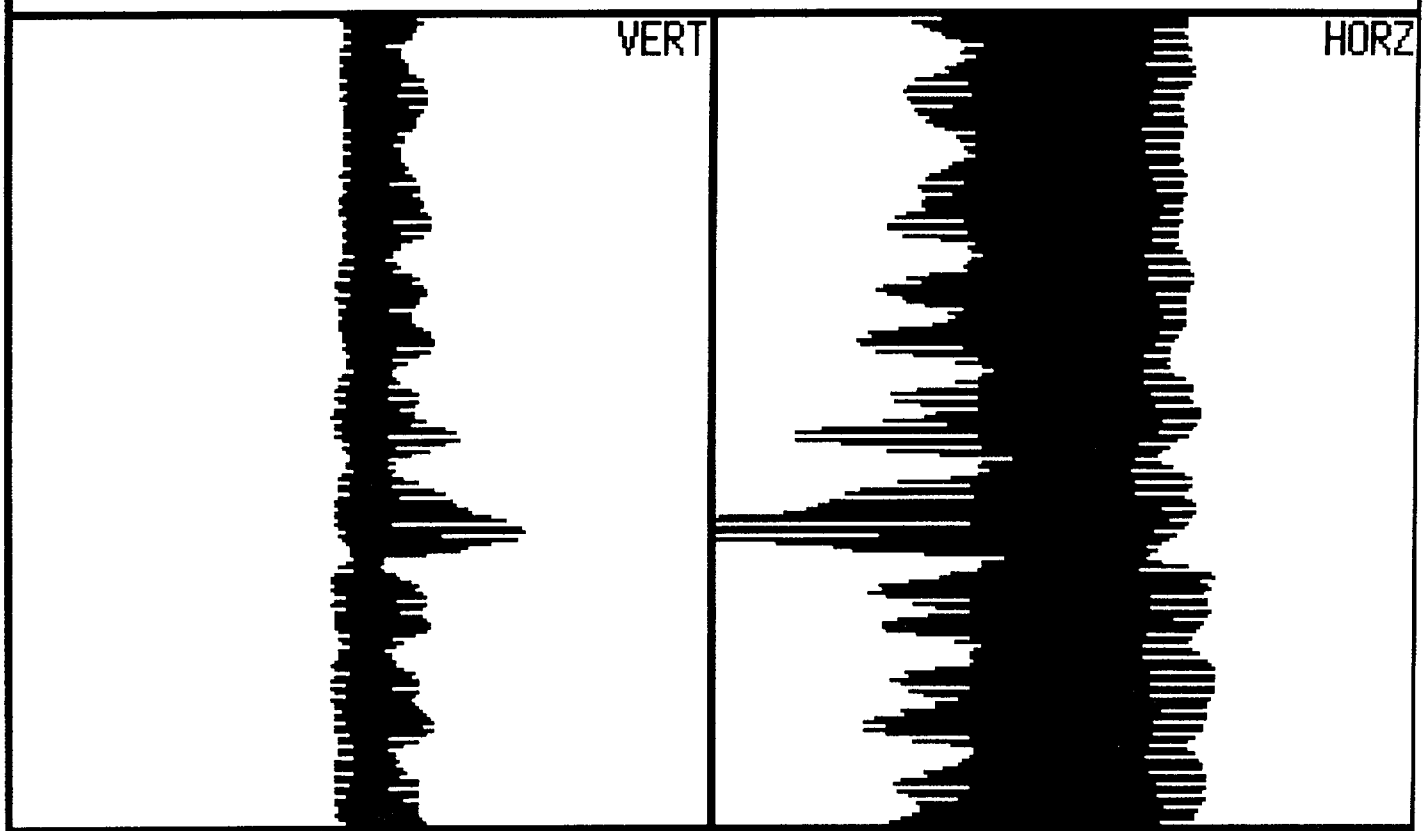
300
KHZ

R1C52
SCI
PRE INSITU
MR

R1 C52 PRE INSITU

SNR WIDGET

NOISE ONLY | DIFF SIGNL | AXIAL FLAW | FIND SIGNAL END PTS | SET NOISE START | SET NOISE END



NOISE RMS

T: 0.27v

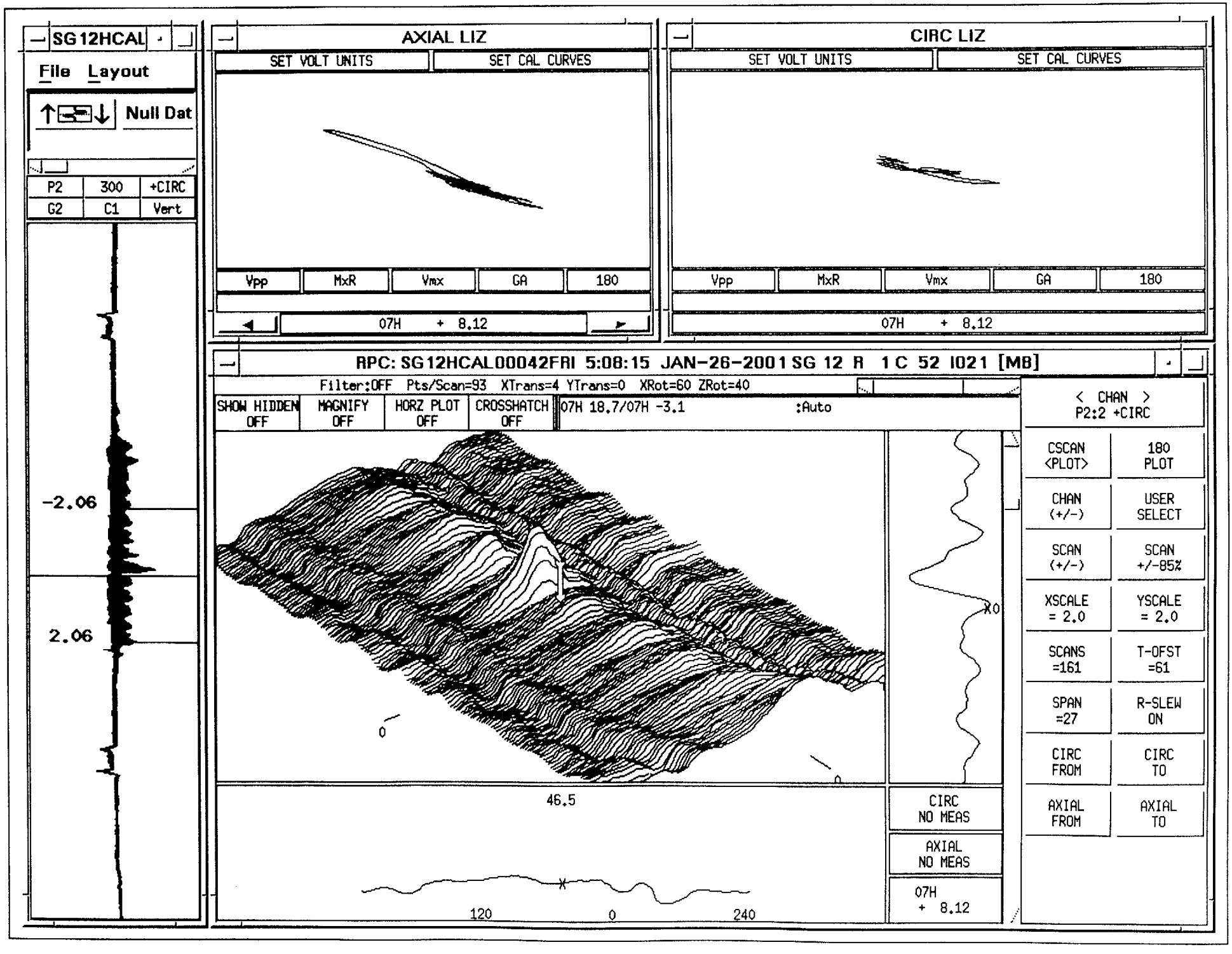
V: 0.08v

H: 0.26v

Total Data Pts: 14283

PLOT DATA | SHOW NOISE | DONE

18


SG12HCAL
File Layout
Null Dat
P2 300 +CIRC
G2 C1 Vert
-2.06
2.06
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 8.12
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 8.12
RPC: SG12HCAL00042FRI 5:08:15 JAN-26-2001 SG 12 R 1 C 52 1021 [MB]
Filter:OFF Pts/Scan=93 XTrans=4 YTrans=0 XRot=60 ZRot=40
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
07H 18.7/07H -3.1
:Auto
0
46.5
120 0 240
CIRC NO MEAS
AXIAL NO MEAS
07H + 8.12
< CHAN >
P2:2 +CIRC
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =161
T-OFST =61
SPAN =27
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

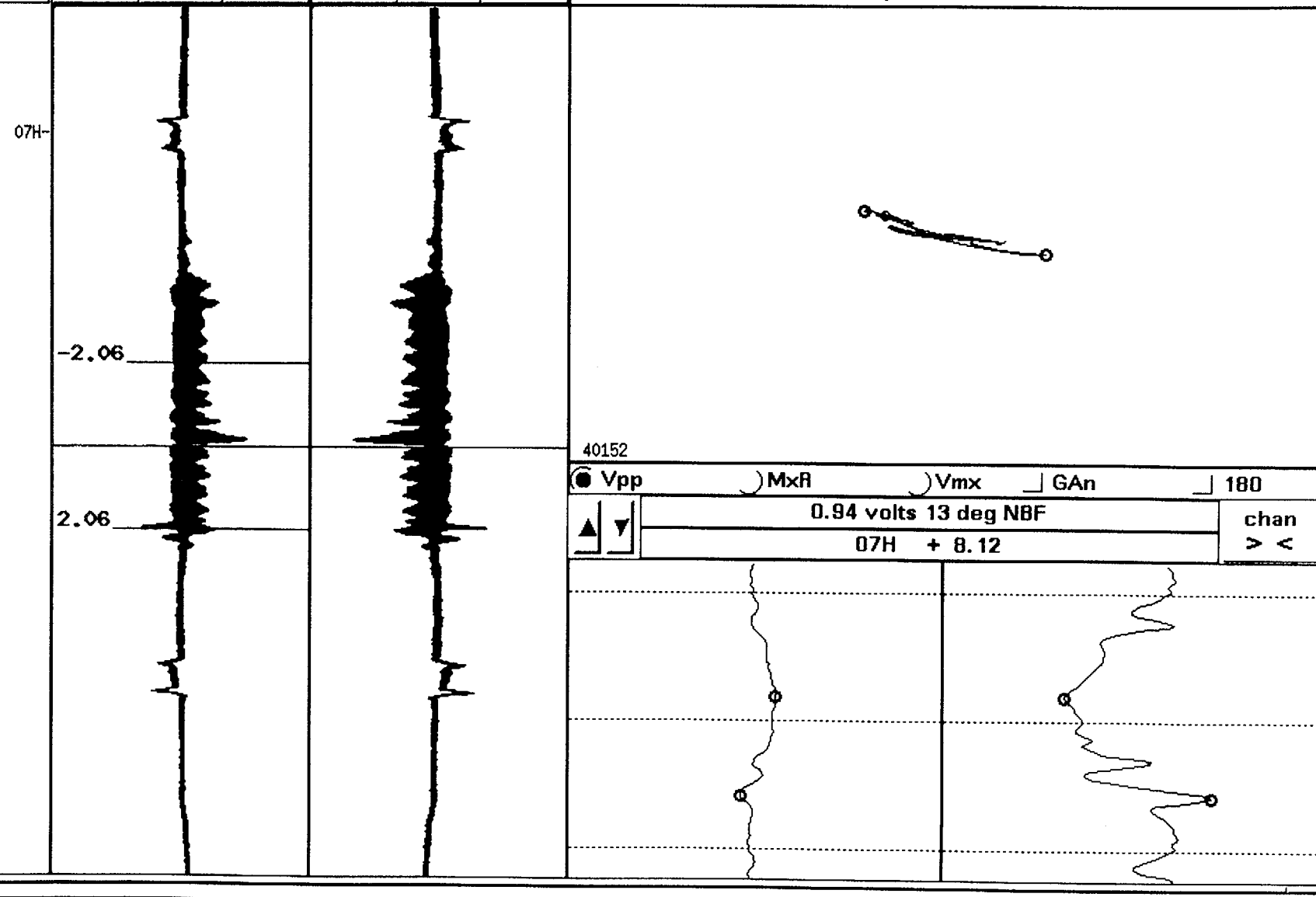
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

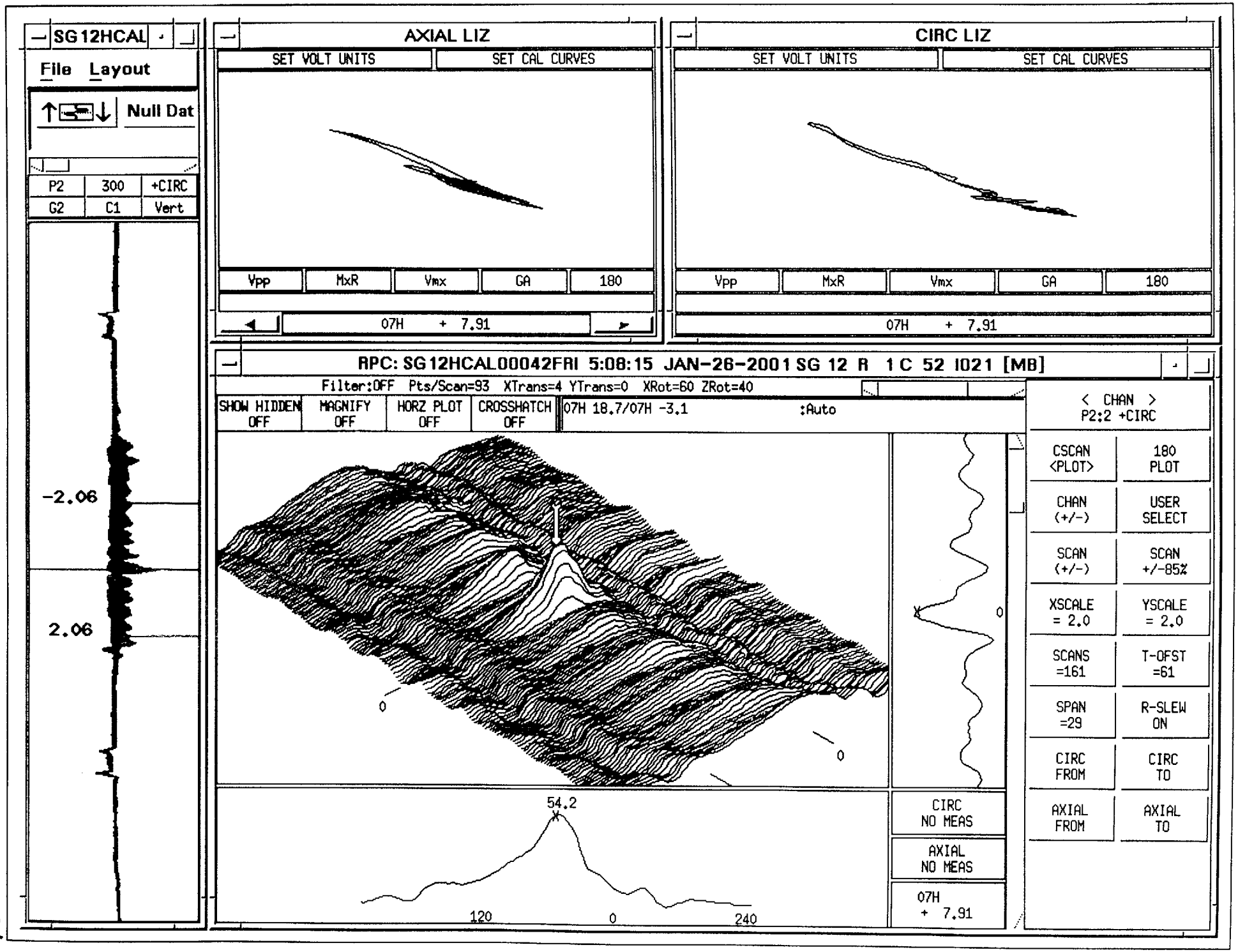
File Analysis System Tools Layout Add Displays Help

Tube Comment: 07H 18.7/07H -3.1 :Auto | NDD | NBF | NBF | NAF | NAF

SG12HCAL00042 FRI 5:08:15 JAN-26-2001 SG 12 ROW 1 COL 52 1021

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.23 v/d		span 27		rot 50




SG12HCAL
File Layout
Null Dat
P2 300 +CIRC
G2 C1 Vert
-2.06
2.06
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 7.91
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 7.91
RPC: SG12HCAL00042FRI 5:08:15 JAN-26-2001 SG 12 R 1 C 52 1021 [MB]
Filter:OFF Pts/Scan=93 XTrans=4 YTrans=0 XRot=60 ZRot=40
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
07H 18.7/07H -3.1
:Auto
0
0
0
54.2
120
0
240
CIRC NO MEAS
AXIAL NO MEAS
07H + 7.91
< CHAN >
P2:2 +CIRC
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =161
T-OFST =61
SPAN =29
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

12

Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

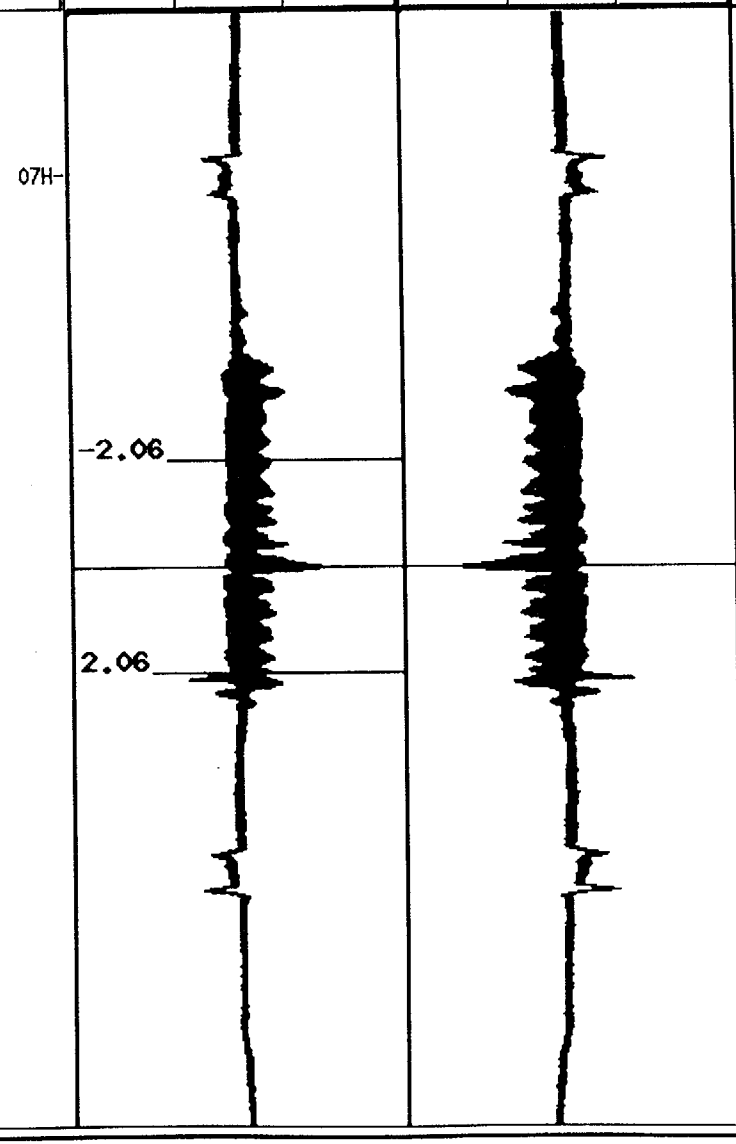
File Analysis System Tools Layout Add Displays Help

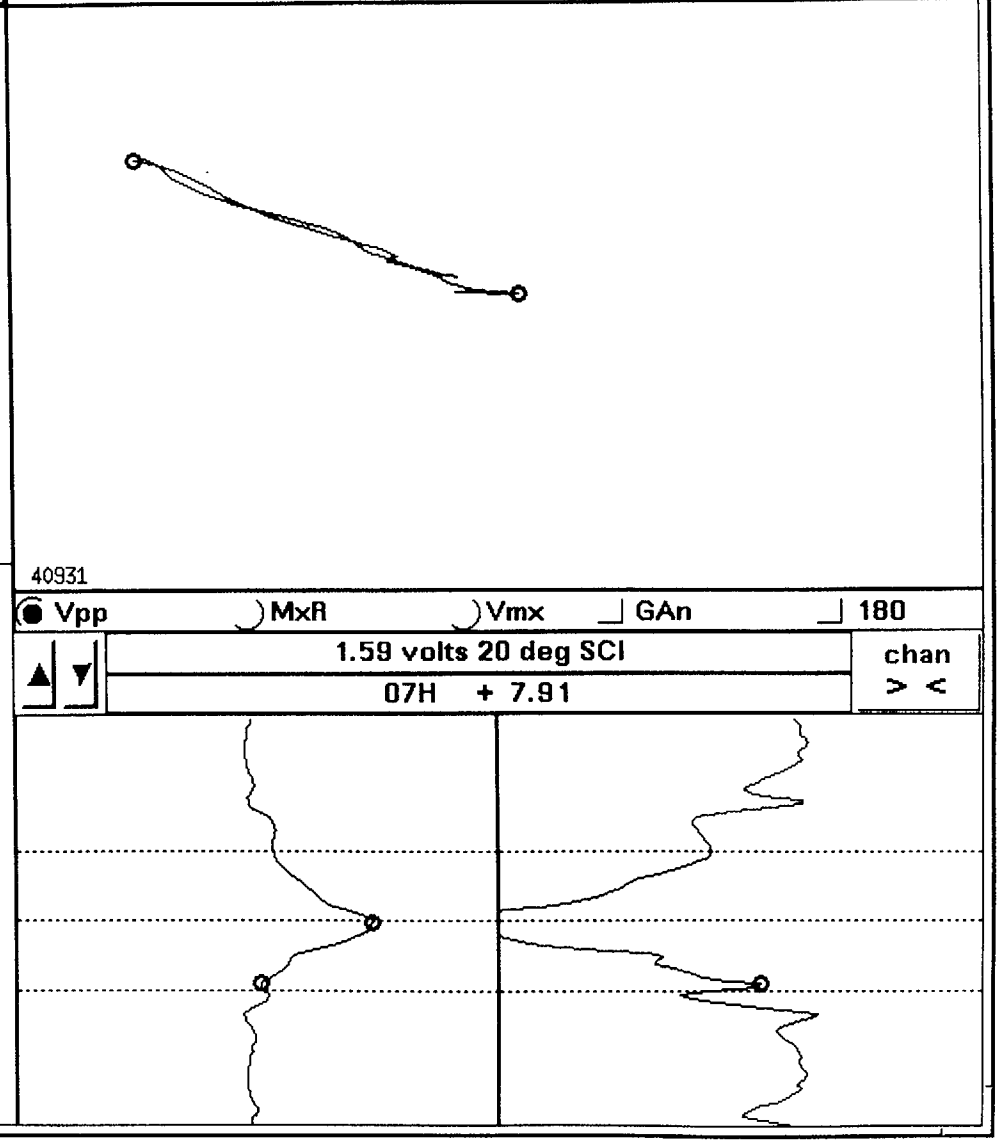
Tube Comment: 07H 18.7/07H -3.1 :Auto

NDD	NBF	NBF	NAF	NAF

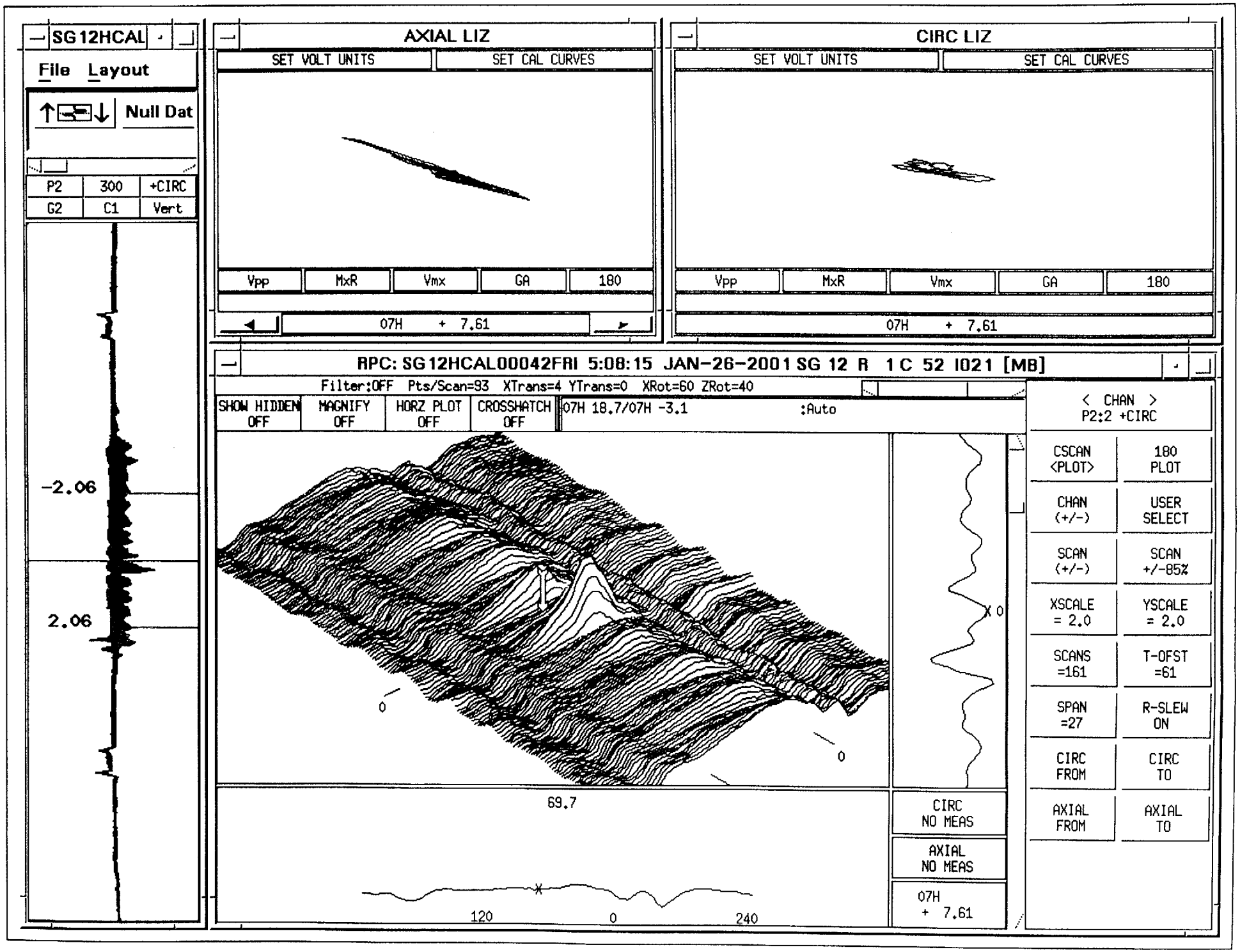
SG12HCAL00042 FRI 5:08:15 JAN-26-2001 SG 12 ROW 1 COL 52 I021

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.23 v/d		span 27		rot 50





22


SG12HCAL
File Layout
Null Dat
P2 300 +CIRC
G2 C1 Vert
-2.06
2.06
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 7.61
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 7.61
RPC: SG12HCAL00042FRI 5:08:15 JAN-26-2001 SG 12 R 1C 52 1021 [MB]
Filter:OFF Pts/Scan=93 XTrans=4 YTrans=0 XRot=60 ZRot=40
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
07H 18.7/07H -3.1
:Auto
0
0
X 0
69.7
120
0
240
CIRC NO MEAS
AXIAL NO MEAS
07H + 7.61
< CHAN >
P2:2 +CIRC
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =161
T-OFST =61
SPAN =27
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

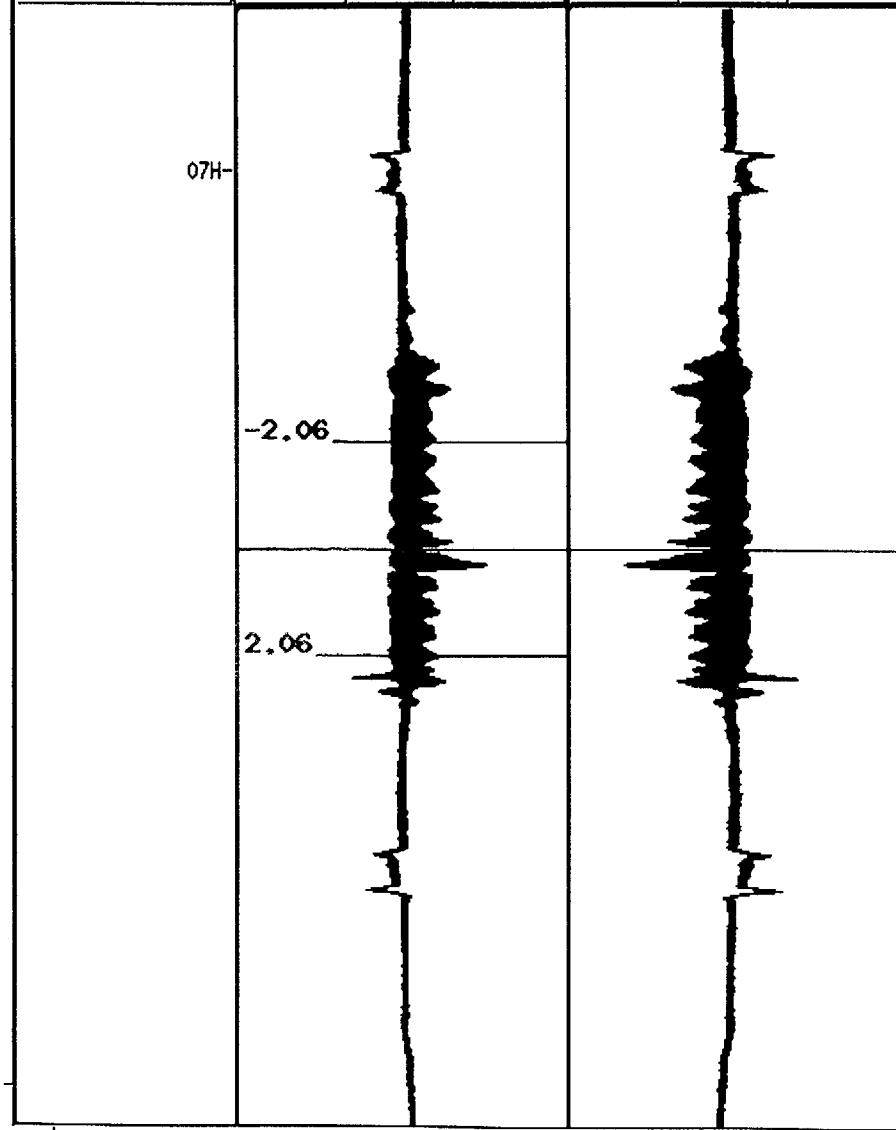
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

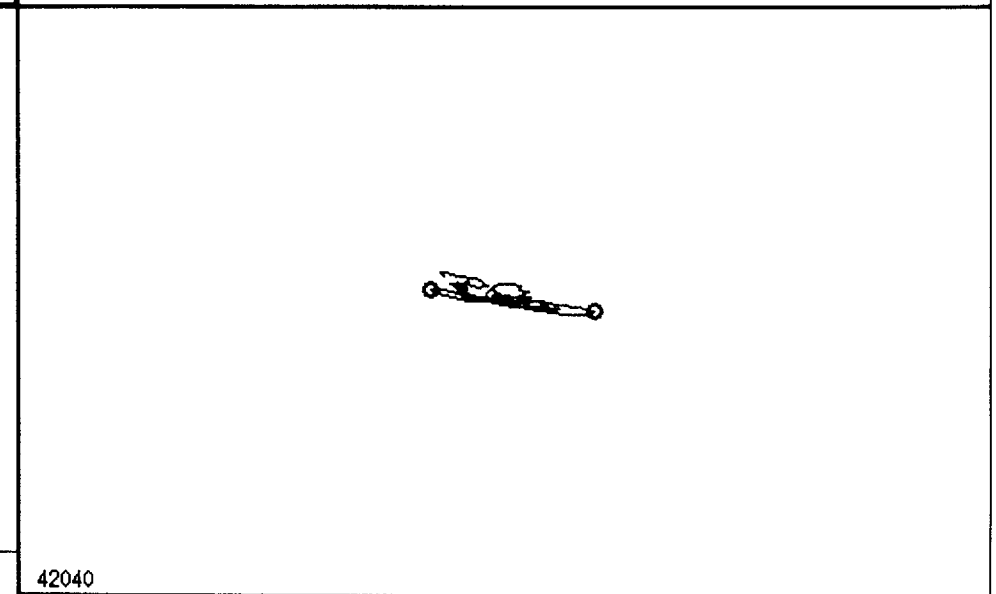
File Analysis System Tools Layout Add Displays Help

Tube Comment: 07H 18.7/07H -3.1 :Auto | NDD | NBF | NBF | NAF | NAF

SG12HCAL00042 FRI 5:08:15 JAN-26-2001 SG 12 ROW 1 COL 52 I021

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.23 v/d		span 27		rot 50



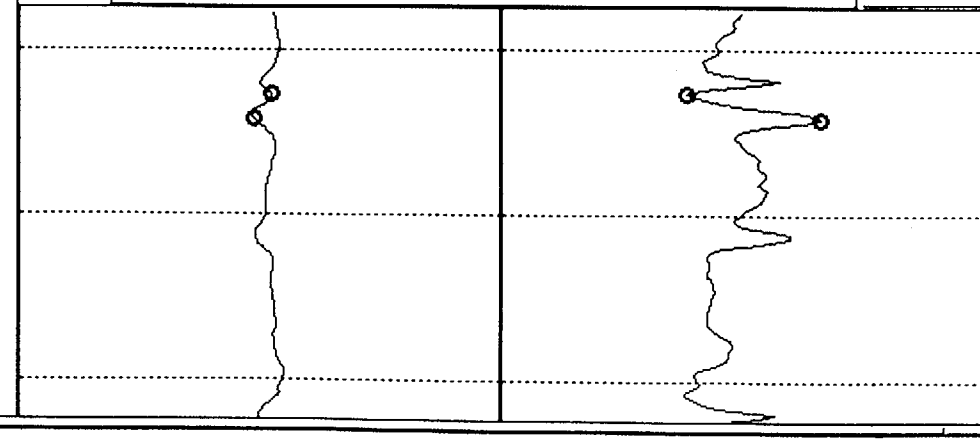


Vpp MxR Vmx GAn 180

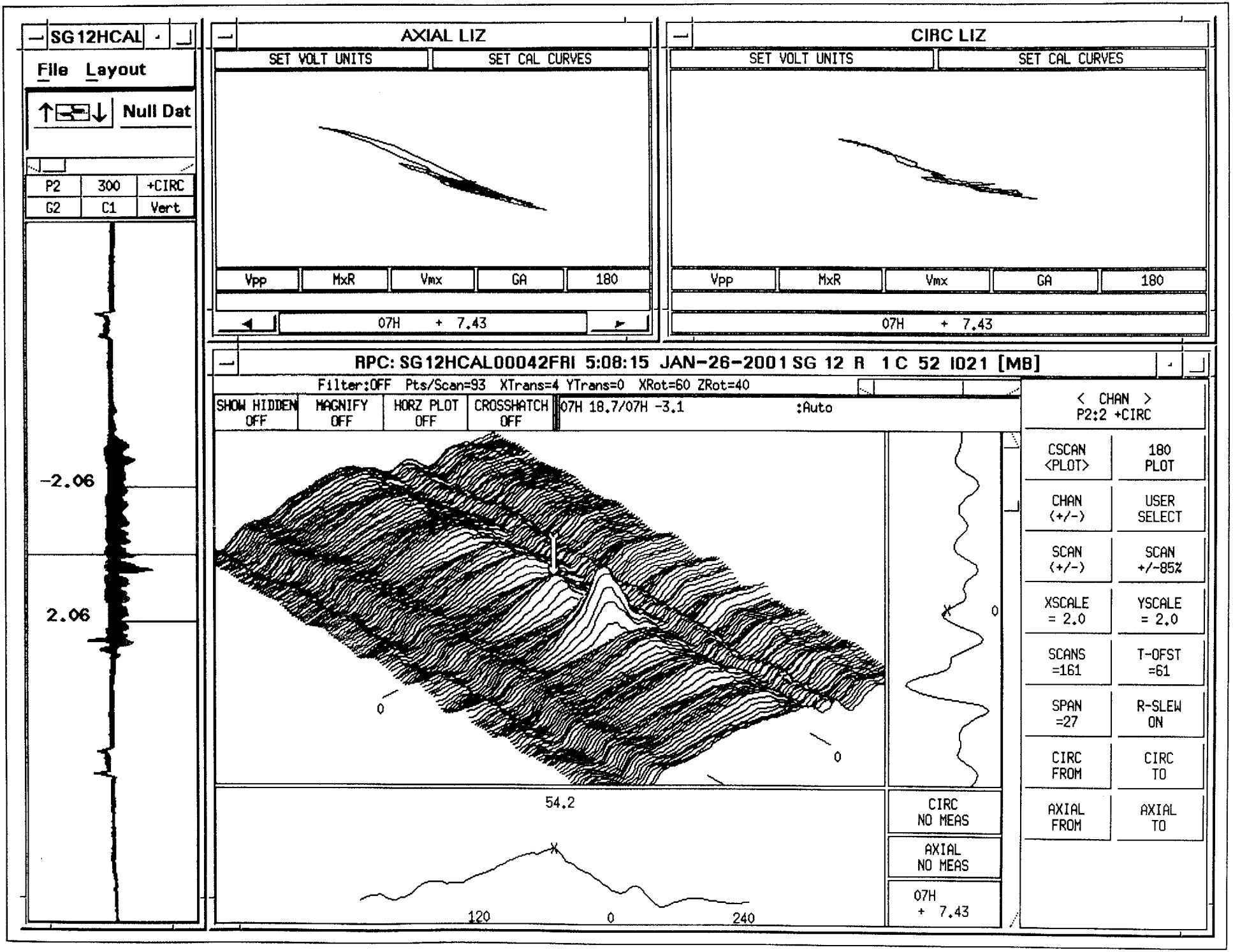
0.65 volts 7 deg NAF

07H + 7.60

chan > <



24


SG12HCAL
File Layout
Null Dat
P2 300 +CIRC
G2 C1 Vert
-2.06
2.06
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 7.43
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 7.43
RPC: SG12HCAL00042FRI 5:08:15 JAN-26-2001 SG 12 R 1 C 52 1021 [MB]
Filter:OFF Pts/Scan=93 XTrans=4 YTrans=0 XRot=60 ZRot=40
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
07H 18.7/07H -3.1
:Auto
0
0
0
54.2
120
0
240
CIRC NO MEAS
AXIAL NO MEAS
07H + 7.43
< CHAN >
P2:2 +CIRC
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =161
T-OFST =61
SPAN =27
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

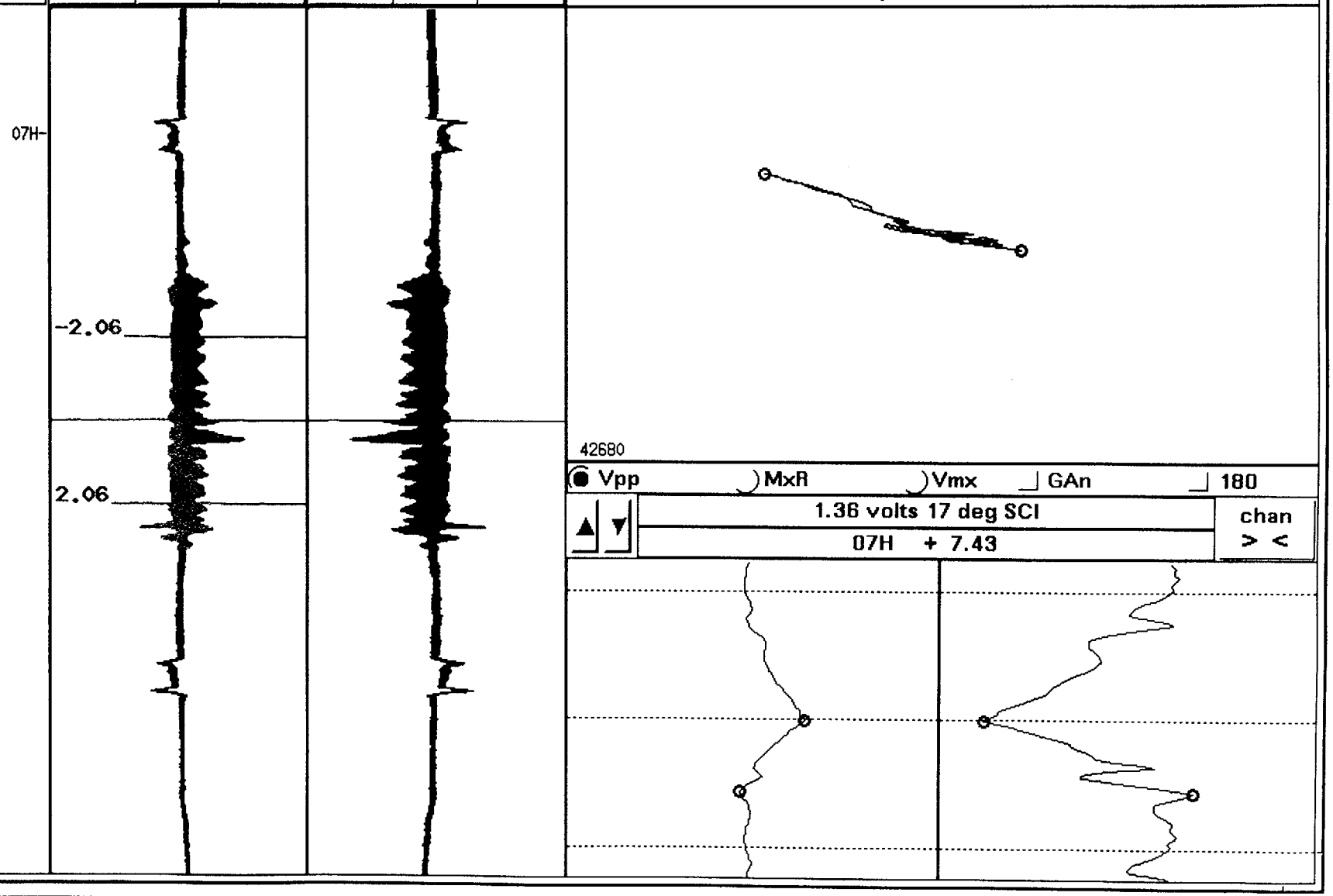
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

File Analysis System Tools Layout Add Displays Help

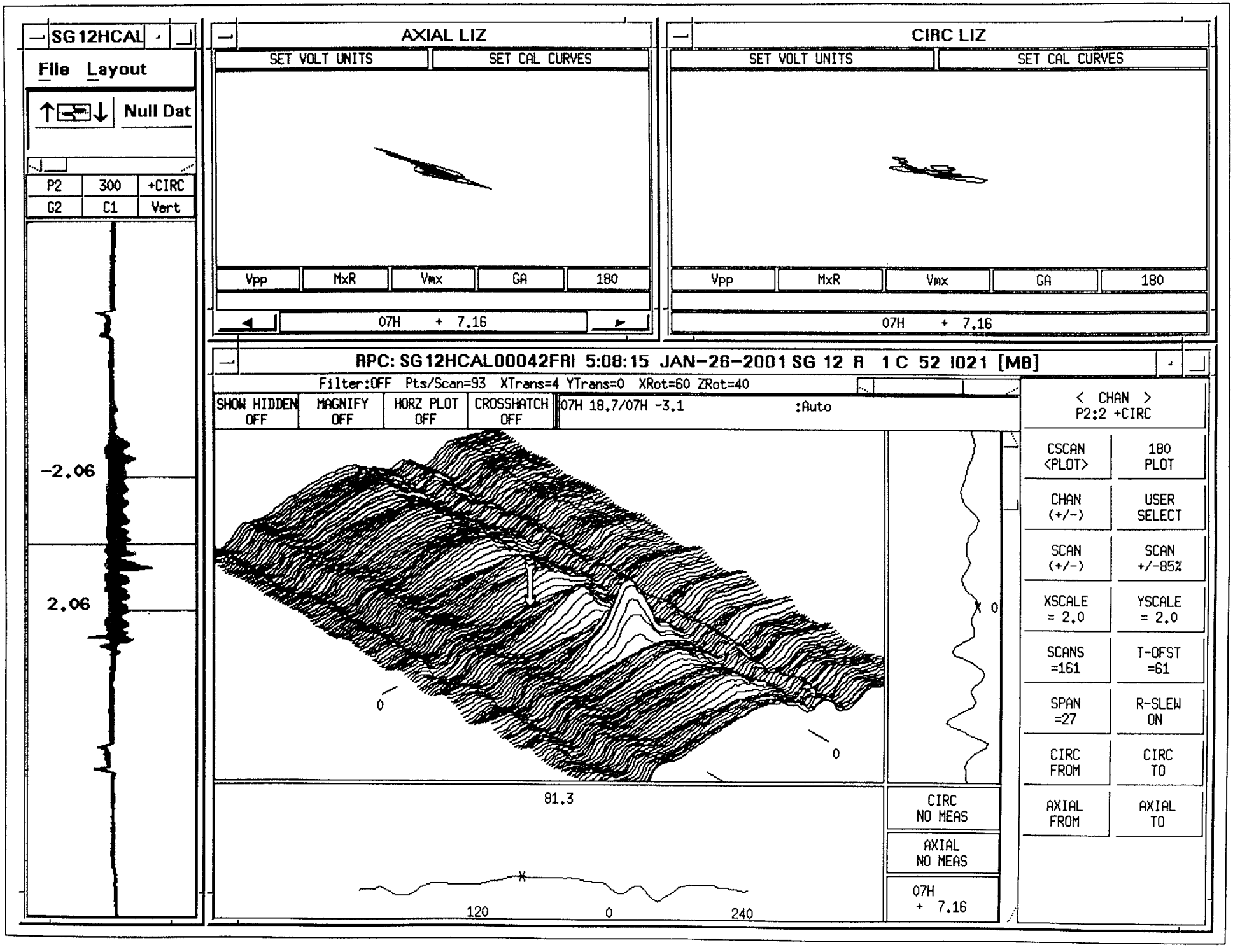
Tube Comment: 07H 18.7/07H -3.1 :Auto | NDD | NBF | NBF | NAF | NAF

SG12HCAL00042 FRI 5:08:15 JAN-26-2001 SG 12 ROW 1 COL 52 I021

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.23 v/d		span 27		rot 50



26


SG12HCAL
File Layout
Null Dat
P2 300 +CIRC
G2 C1 Vert
-2.06
2.06
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 7.16
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 7.16
RPC: SG12HCAL00042FRI 5:08:15 JAN-26-2001 SG 12 R 1 C 52 1021 [MB]
Filter:OFF Pts/Scan=93 XTrans=4 YTrans=0 XRot=60 ZRot=40
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
07H 18.7/07H -3.1
:Auto
0
0
0
81.3
120
0
240
CIRC NO MEAS
AXIAL NO MEAS
07H + 7.16
< CHAN >
P2:2 +CIRC
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =161
T-OFST =61
SPAN =27
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

12

Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

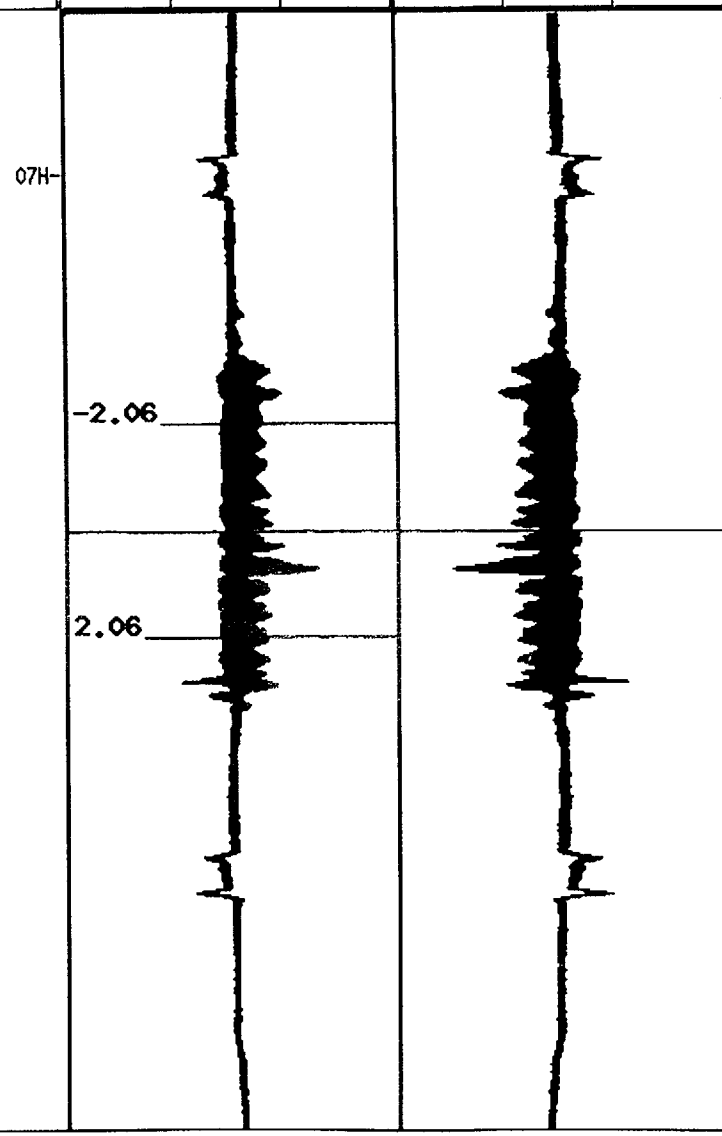
File Analysis System Tools Layout Add Displays Help

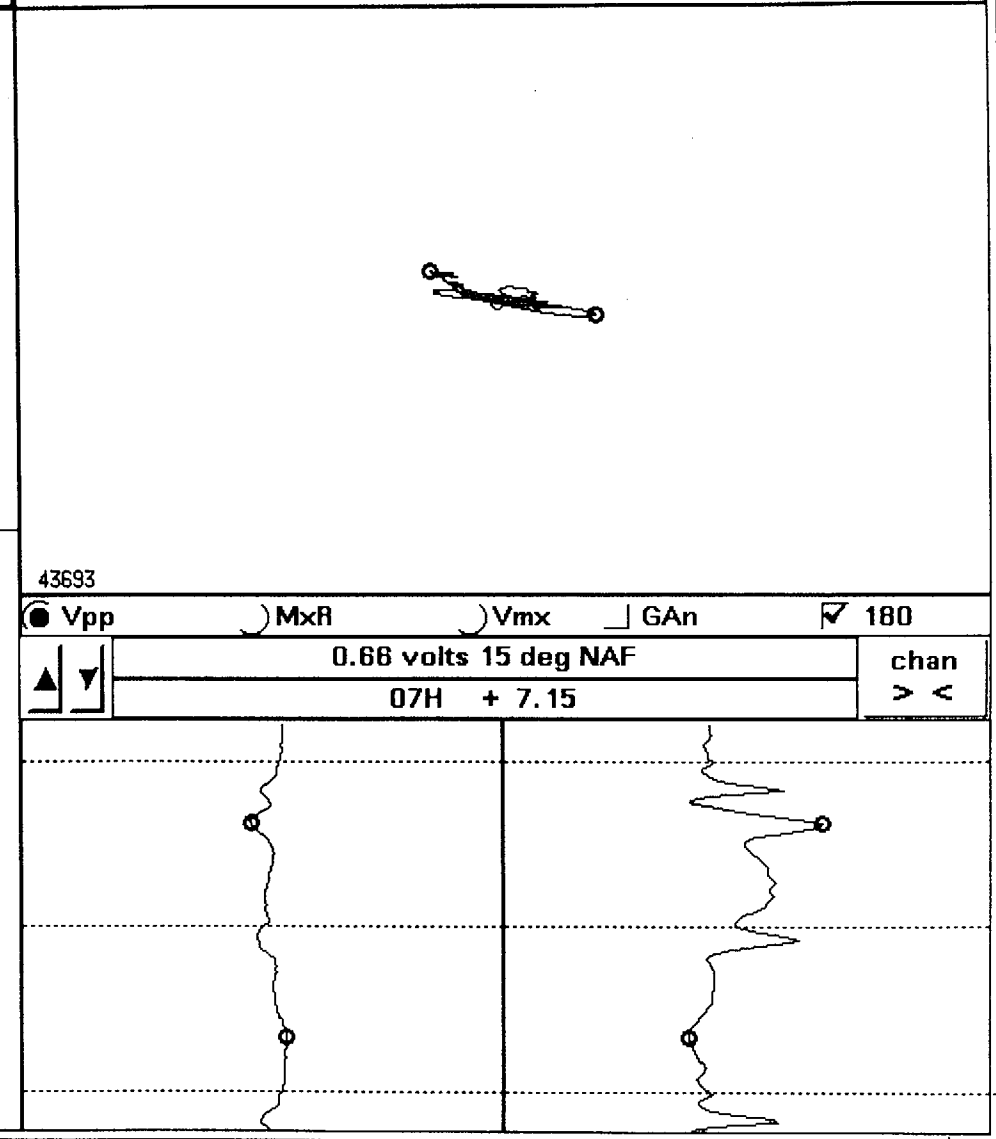
Tube Comment: 07H 18.7/07H -3.1 :Auto

NOD	NBF	NBF	NAF	NAF

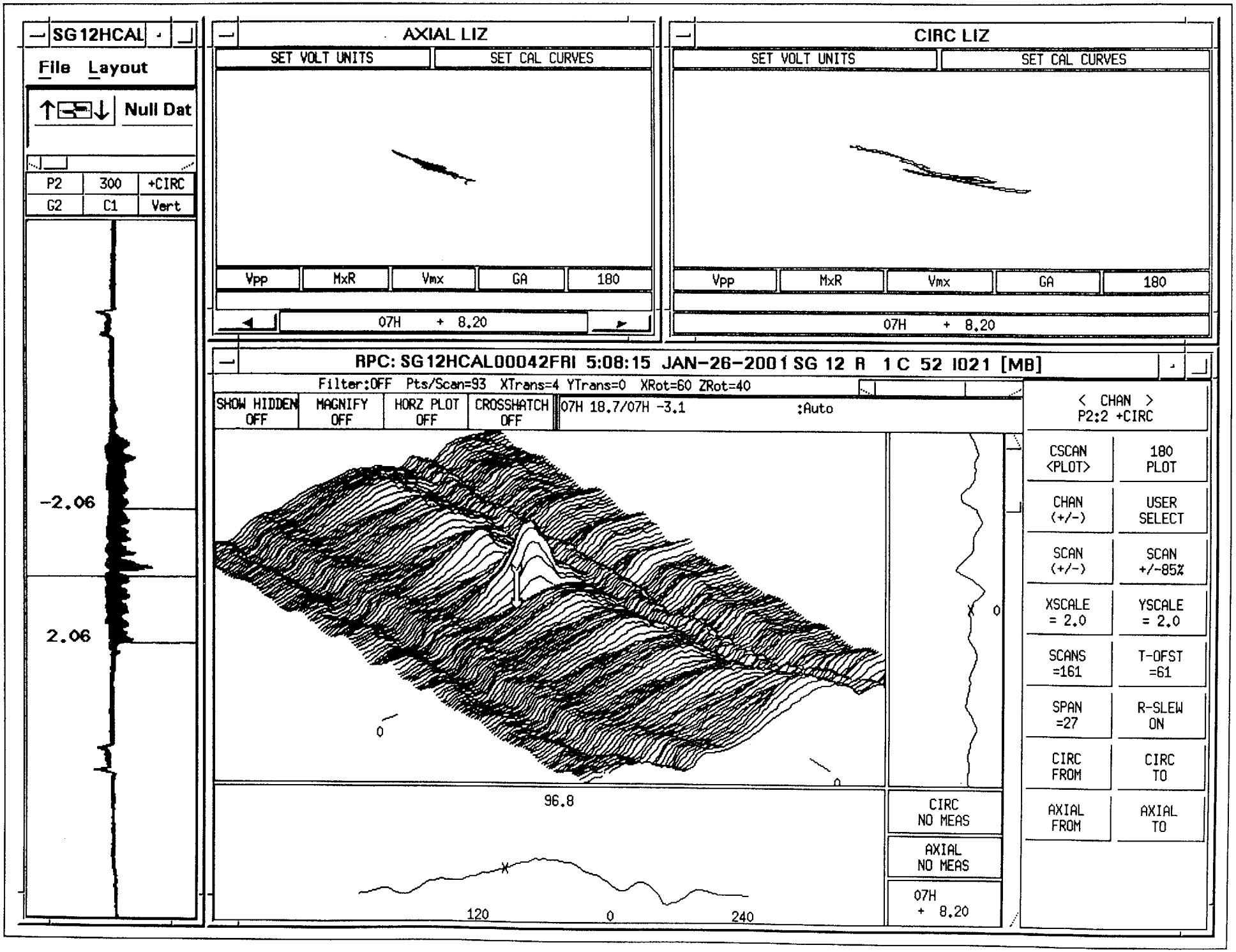
SG12HCAL00042 FRI 5:08:15 JAN-26-2001 SG 12 ROW 1 COL 52 1021

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.23 v/d		span 27		rot 50





88


SG12HCAL
File Layout
Null Dat
P2 300 +CIRC
G2 C1 Vert
-2.06
2.06
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 8.20
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 8.20
RPC: SG12HCAL00042FRI 5:08:15 JAN-26-2001 SG 12 R 1 C 52 1021 [MB]
Filter:OFF Pts/Scan=93 XTrans=4 YTrans=0 XRot=60 ZRot=40
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
07H 18.7/07H -3.1
:Auto
96.8
120
0
240
CIRC NO MEAS
AXIAL NO MEAS
07H + 8.20
< CHAN >
P2:2 +CIRC
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =161
T-OFST =61
SPAN =27
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

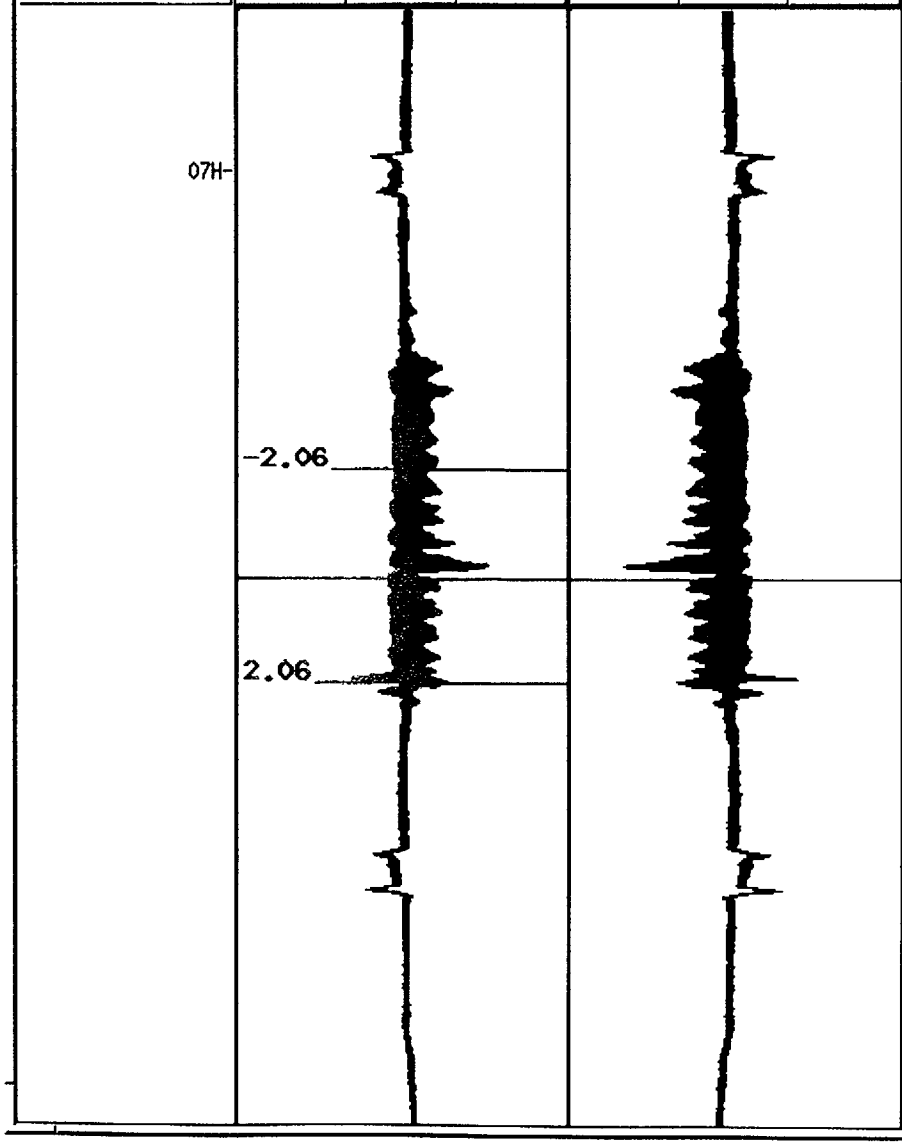
File Analysis System Tools Layout Add Displays Help

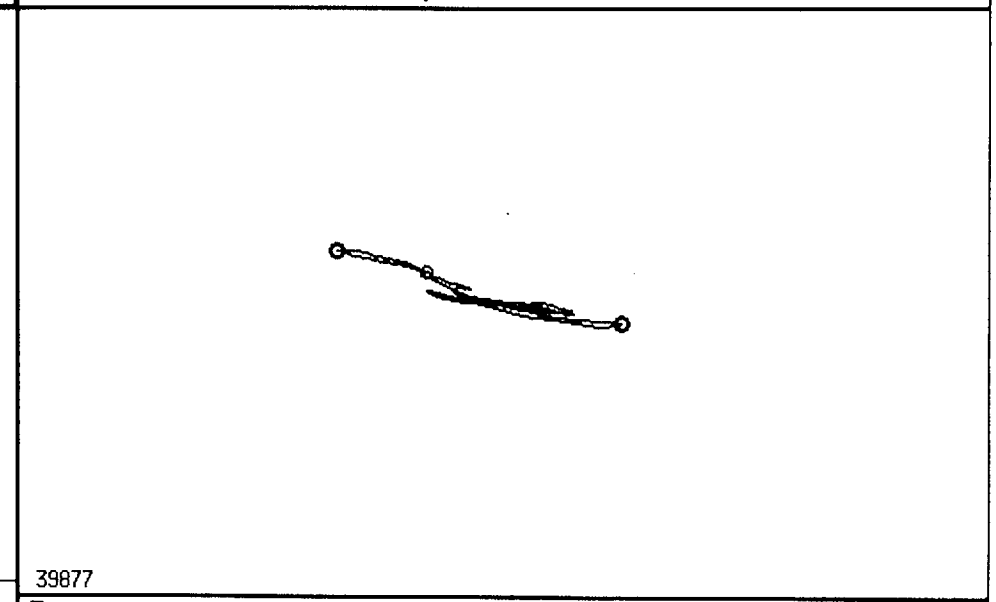
Tube Comment: 07H 18.7/07H -3.1 :Auto

NDD	NBF	NBF	NAF	NAF

SG12HCAL00042 FRI 5:08:15 JAN-26-2001 SG 12 ROW 1 COL 52 I021

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.23 v/d		span 27		rot 50



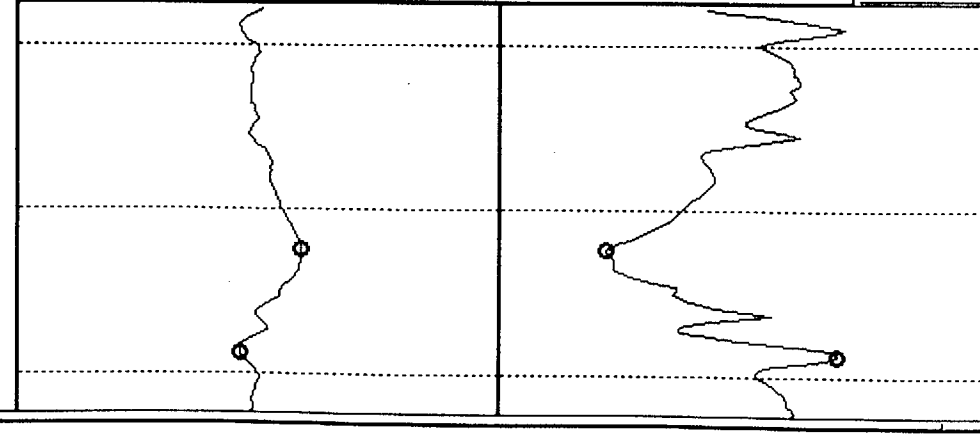


Vpp MxR Vmx GAn 180

1.15 volts 15 deg NM

07H + 8.20

chan > <



SG12HCAL

File Layout

Null Dat

P2	300	+CIRC
G2	C1	Vert

-2.06

2.06

AXIAL LIZ

SET VOLT UNITS | SET CAL CURVES

Vpp | MxR | Vmx | GA | 180

07H + 7.60

CIRC LIZ

SET VOLT UNITS | SET CAL CURVES

Vpp | MxR | Vmx | GA | 180

07H + 7.60

RPC: SG12HCAL00042FRI 5:08:15 JAN-26-2001 SG 12 R 1 C 52 1021 [MB]

Filter:OFF Pts/Scan=93 XTrans=4 YTrans=0 XRot=60 ZRot=40

SHOW HIDDEN OFF | MAGNIFY OFF | HORZ PLOT OFF | CROSSHATCH OFF | 07H 18.7/07H -3.1 :Auto

0

0

0

201.3

120 0 240

CIRC NO MEAS

AXIAL NO MEAS

07H + 7.60

< CHAN >
P2:2 +CIRC

CSCAN <PLOT>	180 PLOT
CHAN (+/-)	USER SELECT
SCAN (+/-)	SCAN +/-85%
XSCALE = 2.0	YSCALE = 2.0
SCANS =161	T-OFST =61
SPAN =27	R-SLEW ON
CIRC FROM	CIRC TO
AXIAL FROM	AXIAL TO

31

Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

File Analysis System Tools Layout Add Displays Help

Tube Comment: 07H 18.7/07H -3.1 :Auto

NDD	NBF	NBF	NAF	NAF

SG12HCAL00042 FRI 5:08:15 JAN-26-2001 SG 12 ROW 1 COL 52 I021

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.23 v/d		span 27		rot 50

07H-

-2.06

2.06

42038

Vpp MxR Vmx GAn 180

0.65 volts 7 deg NBF

07H + 7.60

chan > <

Post
L INSITU
L MR

FILE: /mnt/server3_results/science/SG12HCAL00128 ANALYST: F3453 DATE: WED FEB. 7,2001 13:24
Disk Label= Unknown

12	1	52	0.65	8	NBF	P	2	07H	+8.26	07C07H	VPP	F3453	science	DHR001C052I006 4
12	1	52	0.14	0	NBF	P	2	07H	+8.26	07C07H	VM	F3453	science	DHR001C052I006 5
12	1	52	1.81	20	SCI	P	2	07H	+8.04	07C07H	VPP	F3453	science	DHR001C052I006 6
12	1	52	0.63	0	SCI	P	2	07H	+8.04	07C07H	VMX	F3453	science	DHR001C052I006 7
12	1	52	0.59	8	NAF	P	2	07H	+7.77	07C07H	VPP	F3453	science	DHR001C052I006 8
12	1	52	0.11	0	NAF	P	2	07H	+7.77	07C07H	VM	F3453	science	DHR001C052I006 9
12	1	52	0.53	6	NBF	P	2	07H	+7.72	07C07H	VPP	F3453	science	DHR001C052I006 10
12	1	52	0.13	0	NBF	P	2	07H	+7.72	07C07H	VM	F3453	science	DHR001C052I006 11
12	1	52	1.20	19	SCI	P	2	07H	+7.63	07C07H	VPP	F3453	science	DHR001C052I006 12
12	1	52	0.38	0	SCI	P	2	07H	+7.63	07C07H	VMX	F3453	science	DHR001C052I006 13
12	1	52	0.55	8	NAF	P	2	07H	+7.33	07C07H	VPP	F3453	science	DHR001C052I006 14
12	1	52	0.14	0	NAF	P	2	07H	+7.33	07C07H	VM	F3453	science	DHR001C052I006 15
12	1	52	0.97	15	NM	P	2	07H	+8.36	07C07H	VPP	F3453	science	DHR001C052I006 16
12	1	52	0.26	0	NM	P	2	07H	+8.36	07C07H	VMX	F3453	science	DHR001C052I006 17

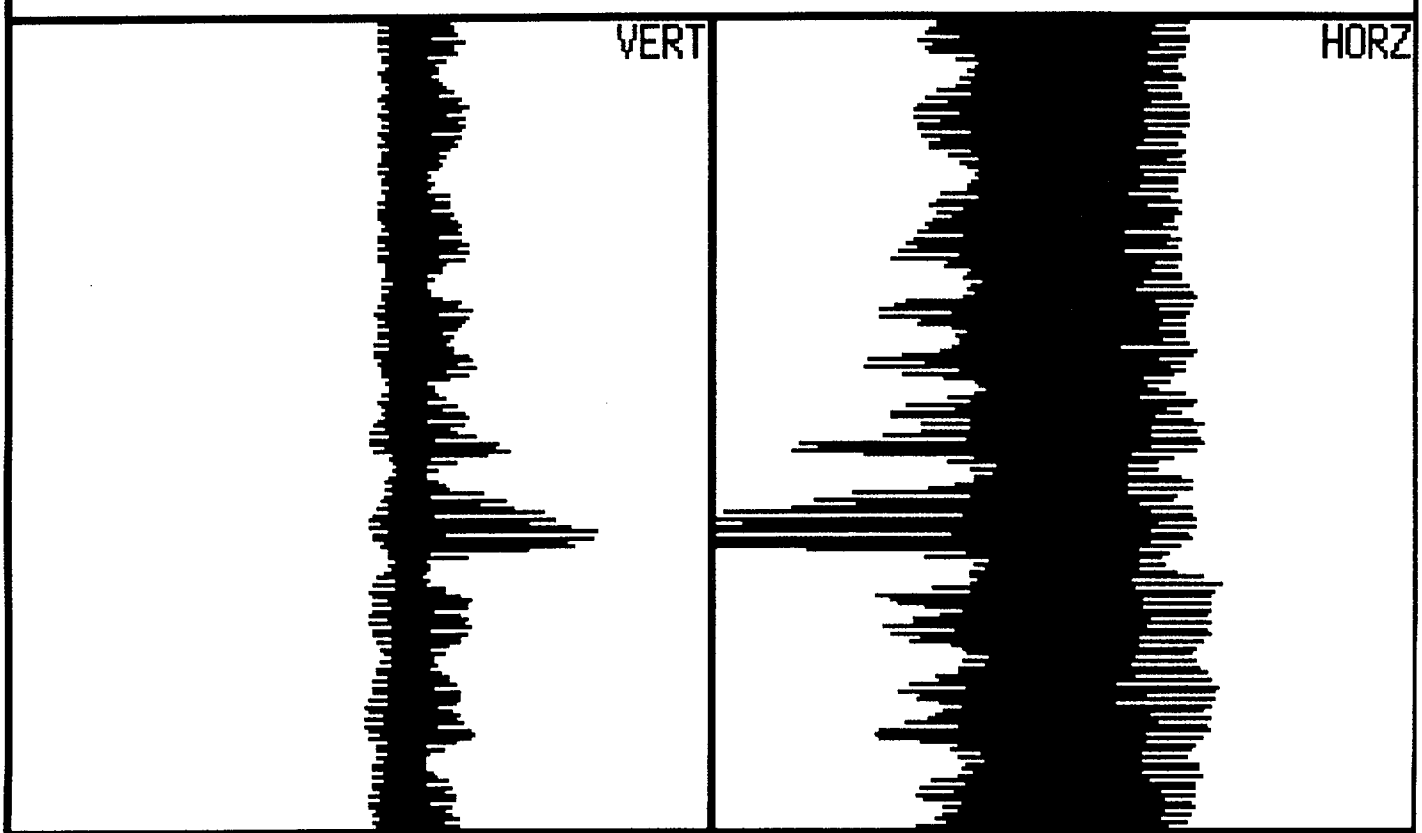
300 KHZ

R1 C52
SCI
POST INSITU
MR

RIC52 POST INSITU

SNR WIDGET

NOISE ONLY | DIFF SIGNL | AXIAL FLAW | FIND SIGNAL END PTS | SET NOISE START | SET NOISE END



NOISE RMS

T: 0.23v

V: 0.07v

H: 0.22v

Total Data Pts: 11255

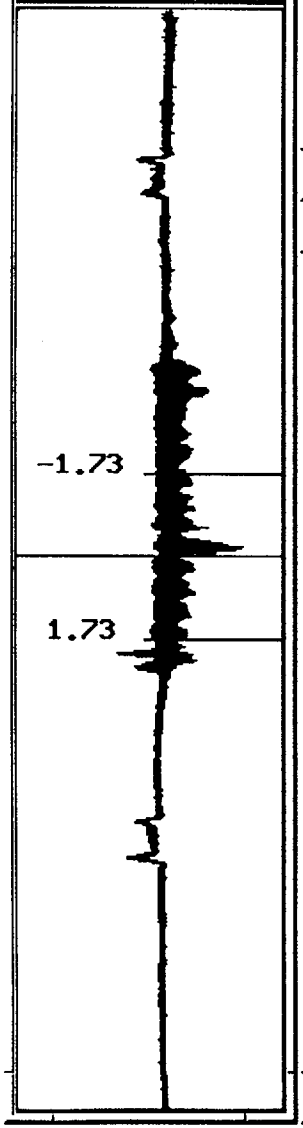
PLOT DATA | SHOW NOISE | DONE

SG12HCAL

File Layout

Null Dat

P2	300	+CIRC
G2	C1	Vert



AXIAL LIZ

SET VOLT UNITS | SET CAL CURVES

Vpp | MxR | Vmx | GA | 180

07H + 8.25

CIRC LIZ

SET VOLT UNITS | SET CAL CURVES

Vpp | MxR | Vmx | GA | 180

07H + 8.25

RPC: SG12HCAL00128WED 13:51:42 JAN-31-2001 SG 12 R 1 C 52 1006 [MB]

Filter:OFF Pts/Scan=86 XTrans=12 YTrans=0 XRot=60 ZRot=40

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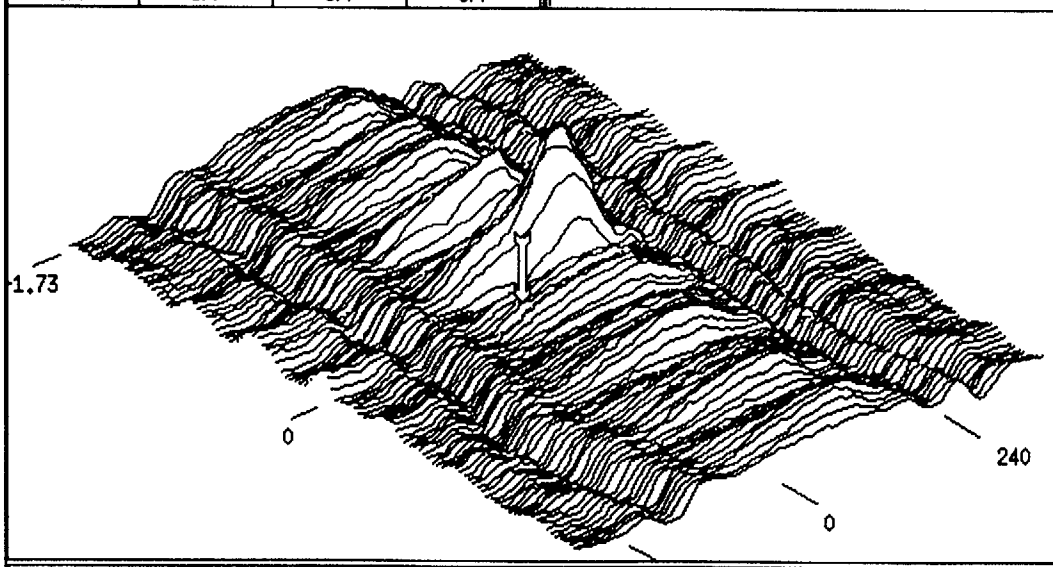
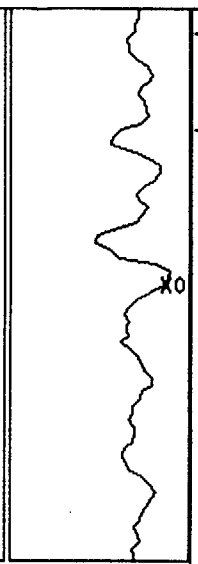
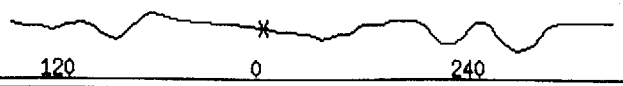




355.8



CIRC NO MEAS

AXIAL NO MEAS

07H + 8.25

< CHAN >
P2:2 +CIRC

CSCAN <PLOT>	180 PLOT
CHAN (+/-)	USER SELECT
SCAN (+/-)	SCAN +/-85%
XSCALE = 2.0	YSCALE = 2.0
SCANS =113	T-OFST =36
SPAN =25	R-SLEW ON
CIRC FROM	CIRC TO
AXIAL FROM	AXIAL TO

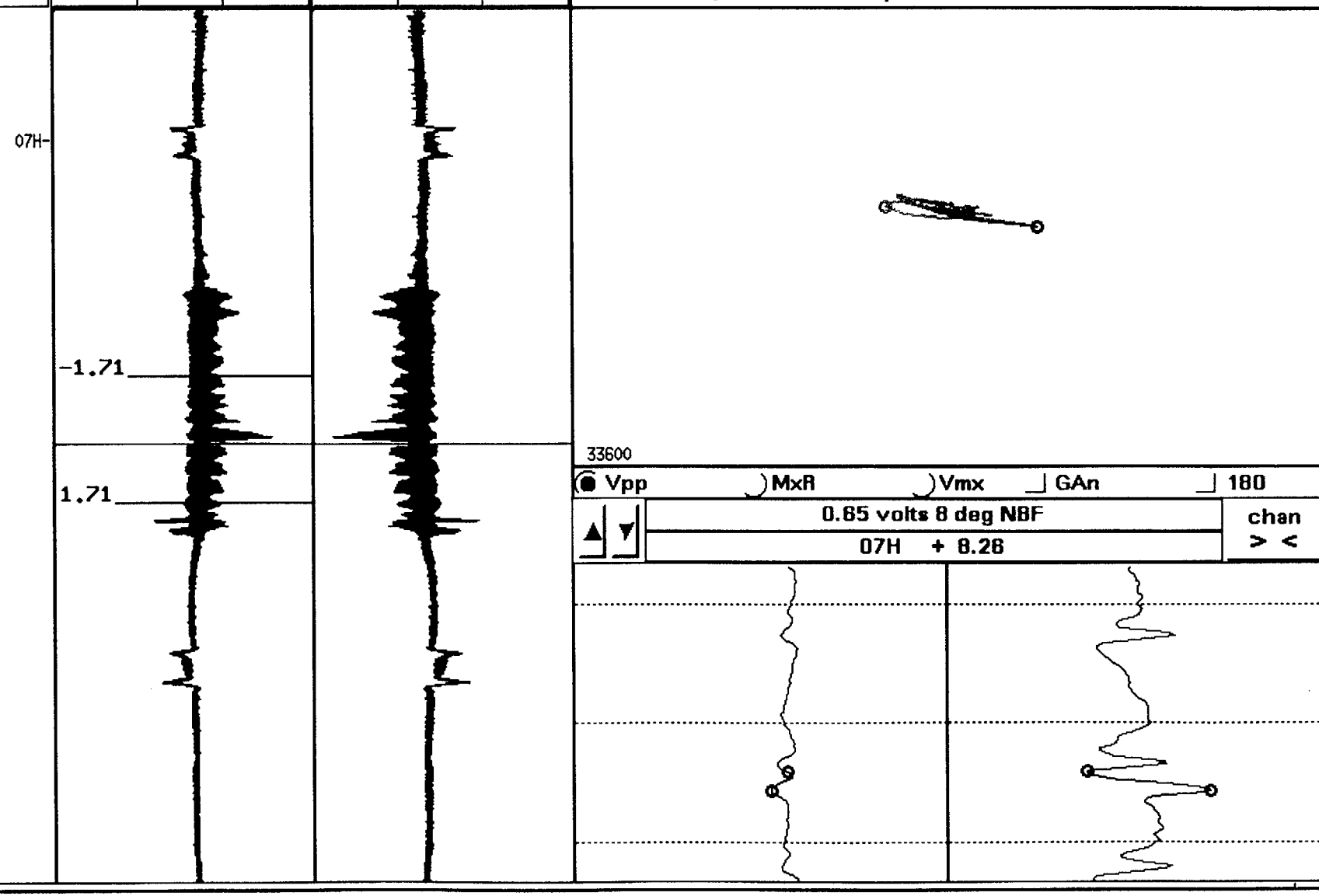
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

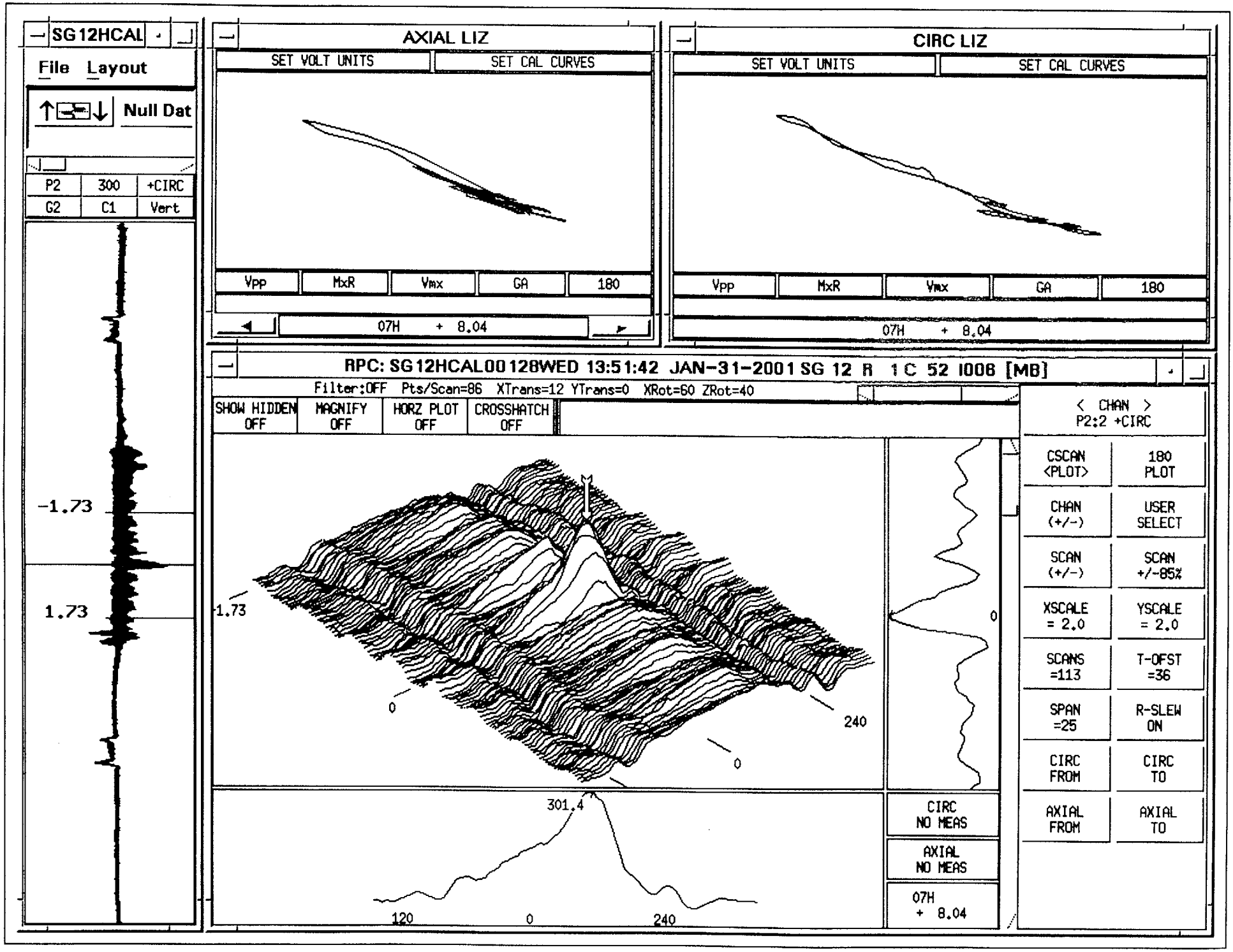
File Analysis System Tools Layout Add Displays Help

Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG12HCAL00128 WED 13:51:42 JAN-31-2001 SG 12 ROW 1 COL 52 I006

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.20 v/d		span 25		rot 50




SG12HCAL
File Layout
Null Dat
P2 300 +CIRC
G2 C1 Vert
-1.73
1.73
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 8.04
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 8.04
RPC: SG12HCAL00128WED 13:51:42 JAN-31-2001 SG 12 R 1 C 52 1006 [MB]
Filter:OFF Pts/Scan=86 XTrans=12 YTrans=0 XRot=60 ZRot=40
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
-1.73
0
240
0
0
301.4
120
0
240
CIRC NO MEAS
AXIAL NO MEAS
07H + 8.04
< CHAN >
P2:2 +CIRC
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =113
T-OFST =36
SPAN =25
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

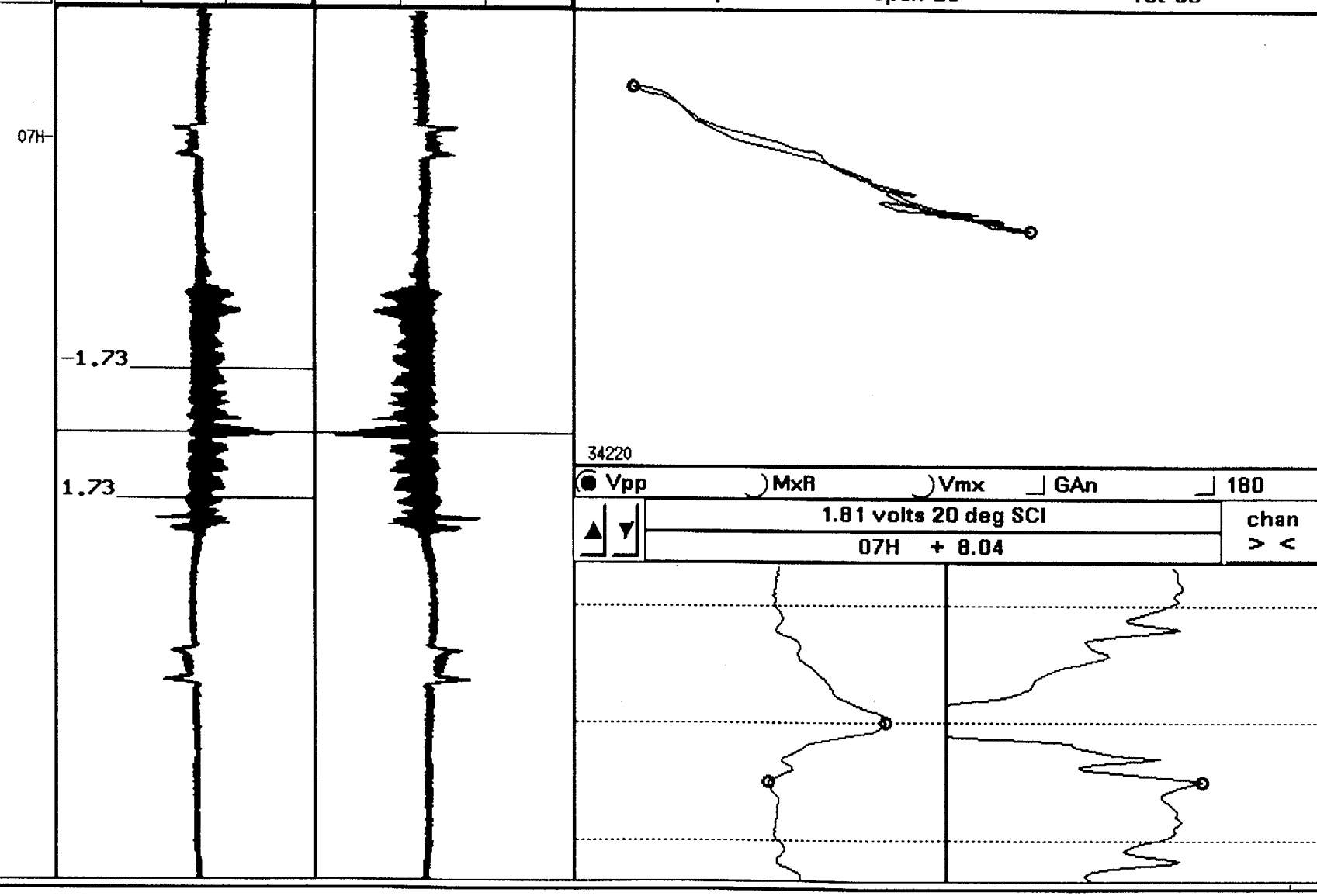
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

File Analysis System Tools Layout Add Displays Help

Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG12HCAL00128 WED 13:51:42 JAN-31-2001 SG 12 ROW 1 COL 52 1006

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.20 v/d		span 25		rot 50



SG12HCAL

File Layout

Null Dat

P2	300	+CIRC
G2	C1	Vert

-1.73

1.73

AXIAL LIZ

SET VOLT UNITS | SET CAL CURVES

Vpp | MxR | Vmx | GA | 180

07H + 7.78

CIRC LIZ

SET VOLT UNITS | SET CAL CURVES

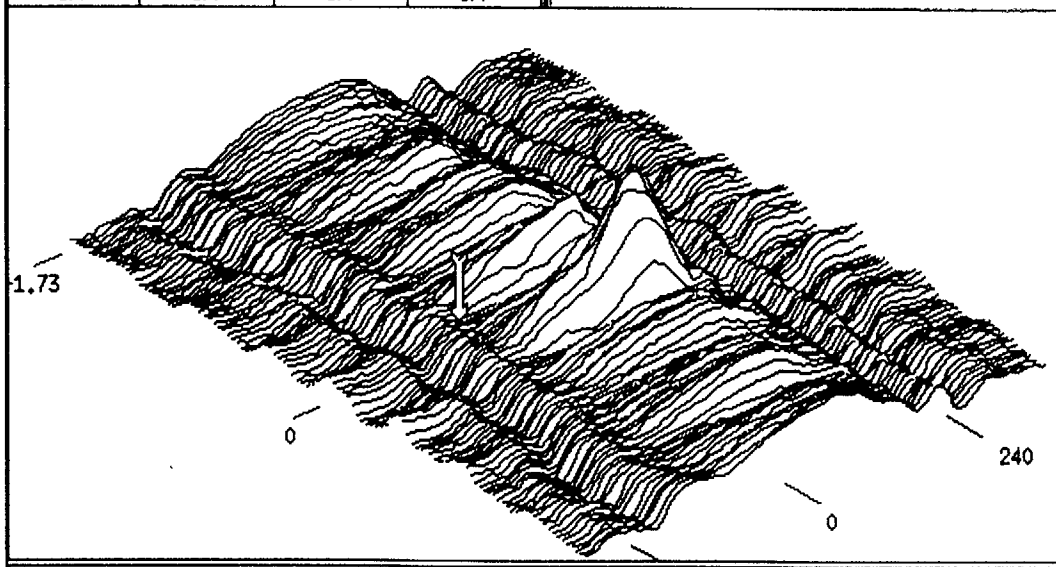
Vpp | MxR | Vmx | GA | 180

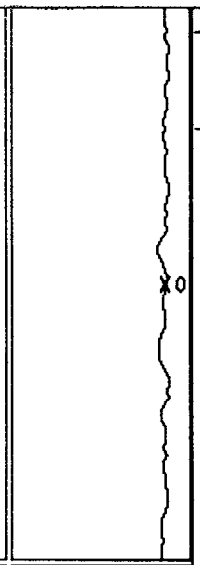
07H + 7.78

RPC: SG12HCAL00128WED 13:51:42 JAN-31-2001 SG 12 R 1 C 52 1006 [MB]

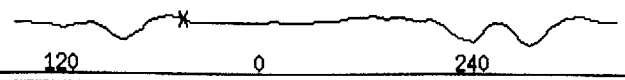
Filter:OFF Pts/Scan=86 XTrans=12 YTrans=0 XRot=60 ZRot=40

SHOW HIDDEN OFF | MAGNIFY OFF | HORZ PLOT OFF | CROSSHATCH OFF





46.0



CIRC NO MEAS

AXIAL NO MEAS

07H + 7.78

< CHAN >
P2:2 +CIRC

CSCAN <PLOT>	180 PLOT
CHAN (+/-)	USER SELECT
SCAN (+/-)	SCAN +/-85%
XSCALE = 2.0	YSCALE = 2.0
SCANS =113	T-OFST =36
SPAN =25	R-SLEW ON
CIRC FROM	CIRC TO
AXIAL FROM	AXIAL TO

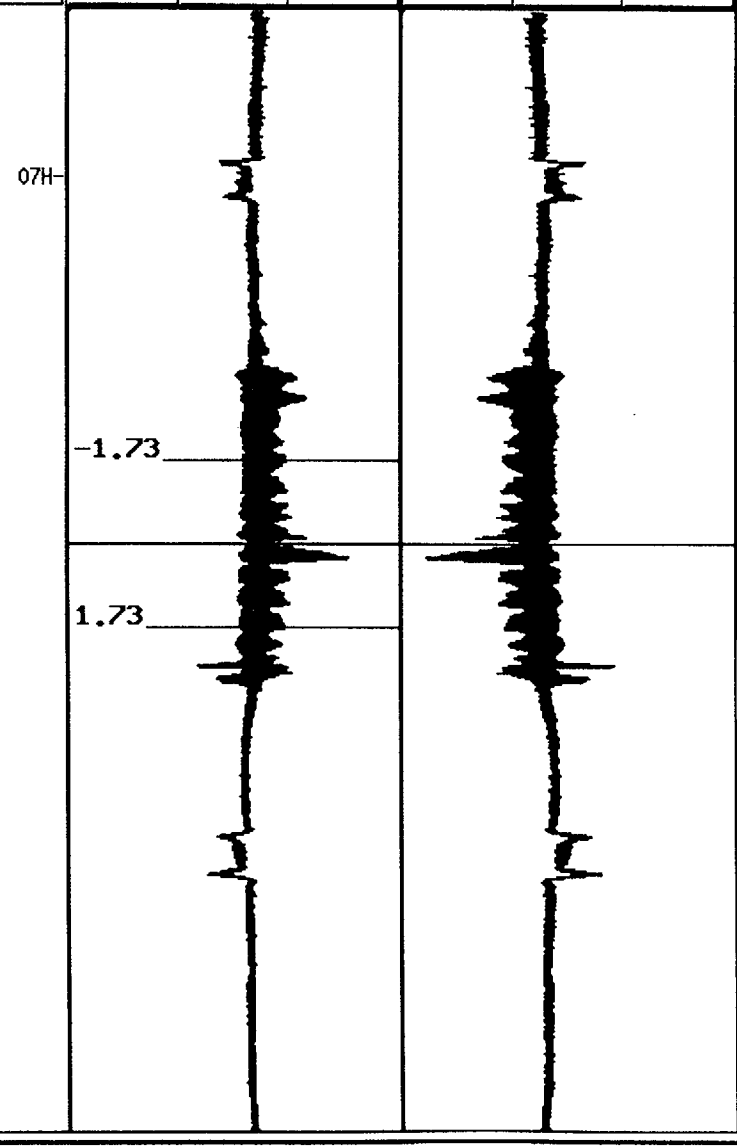
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

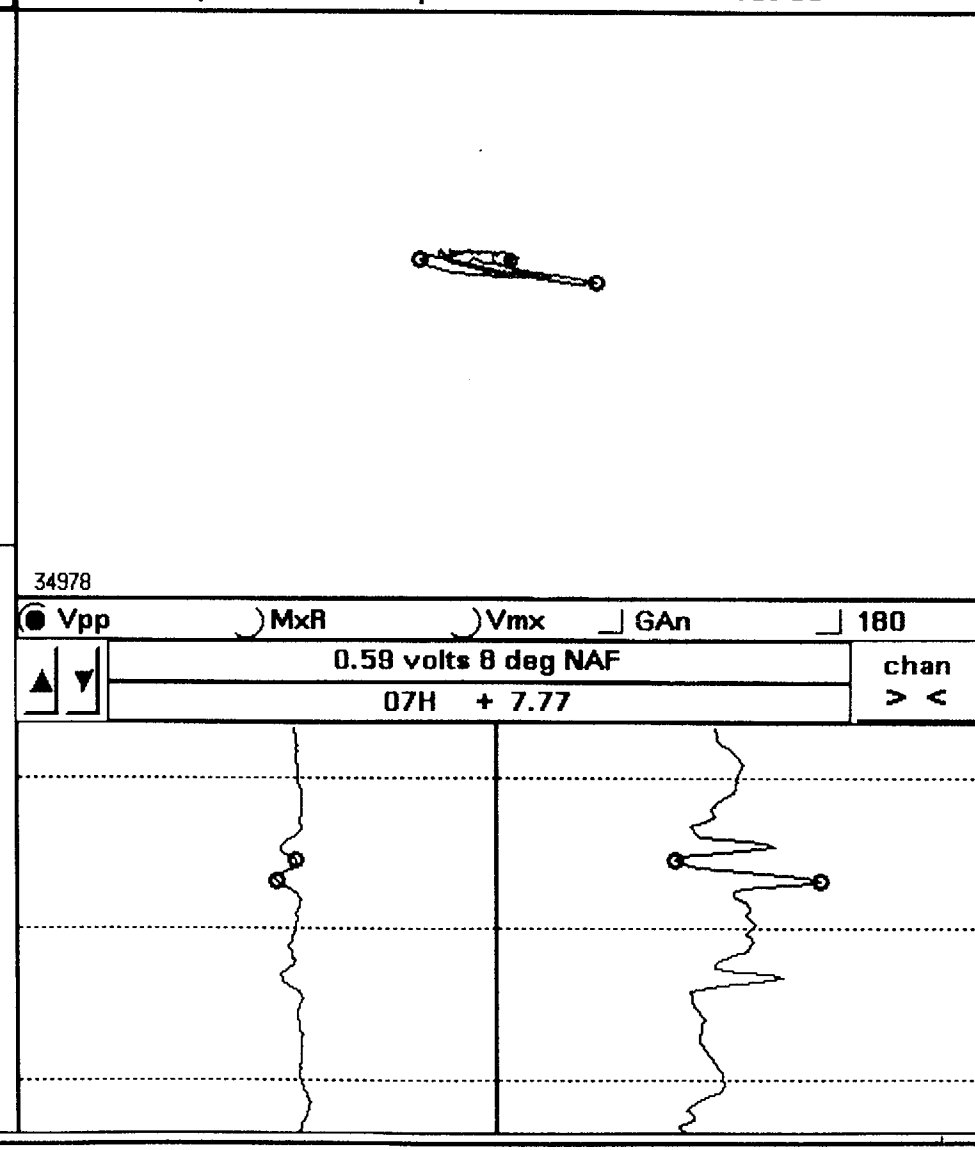
File Analysis System Tools Layout Add Displays Help

Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG12HCAL00128 WED 13:51:42 JAN-31-2001 SG 12 ROW 1 COL 52 I006

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.20 v/d		span 25		rot 50



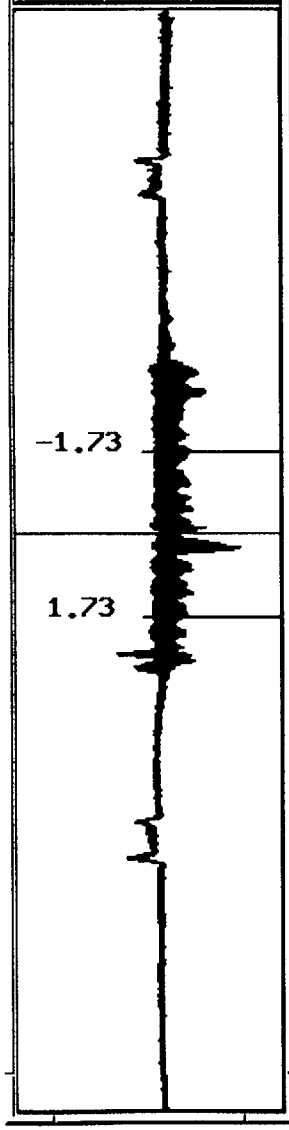


SG12HCAL

File Layout

Null Dat

P2	300	+CIRC
G2	C1	Vert



AXIAL LIZ

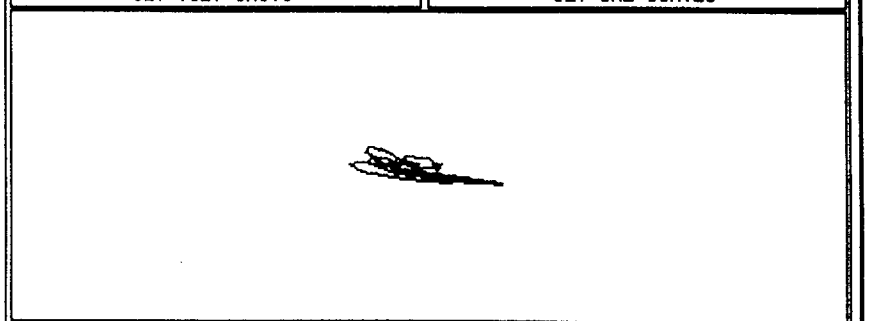
SET VOLT UNITS | SET CAL CURVES

Vpp | MxR | Vmx | GA | 180

07H + 7.75

CIRC LIZ

SET VOLT UNITS | SET CAL CURVES



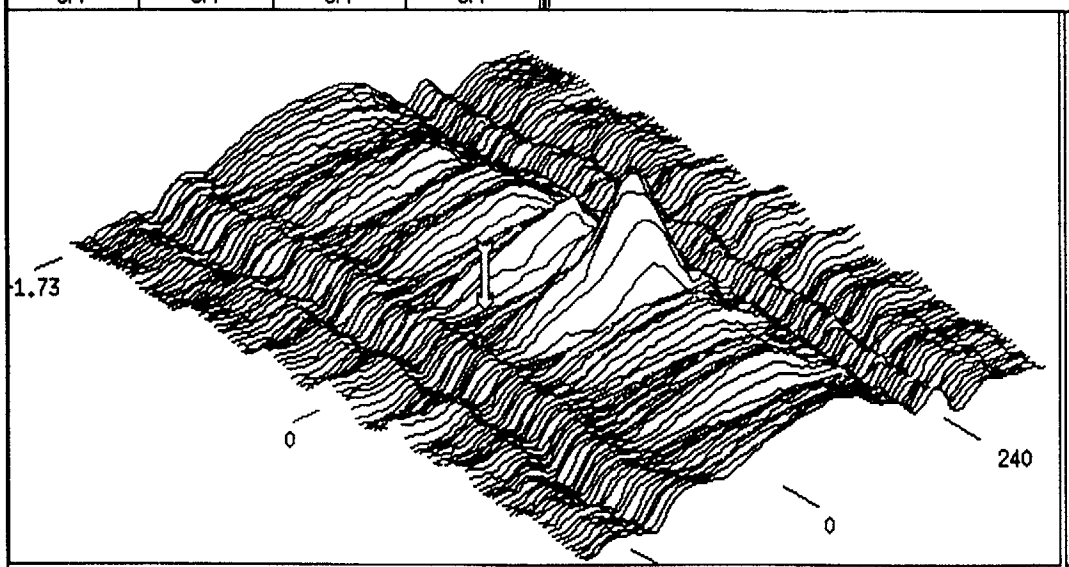
Vpp | MxR | Vmx | GA | 180

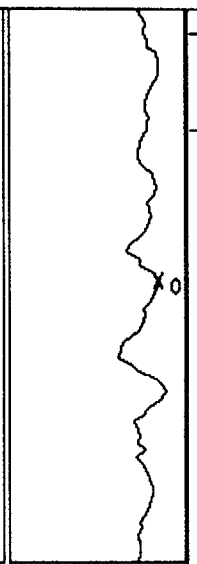
07H + 7.75

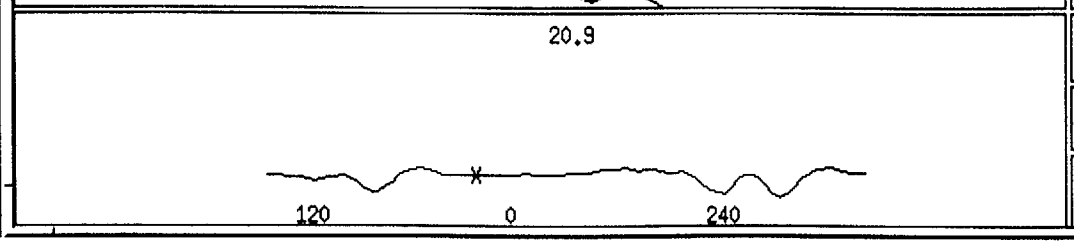
RPC: SG12HCAL00128WED 13:51:42 JAN-31-2001 SG 12 R 1 C 52 1006 [MB]

Filter:OFF Pts/Scan=86 XTrans=12 YTrans=0 XRot=60 ZRot=40

SHOW HIDDEN OFF | MAGNIFY OFF | HORZ PLOT OFF | CROSSHATCH OFF







CIRC NO MEAS

AXIAL NO MEAS

07H + 7.75

< CHAN >
P2:2 +CIRC

CSCAN <PLOT>	180 PLOT
CHAN (+/-)	USER SELECT
SCAN (+/-)	SCAN +/-85%
XSCALE = 2.0	YSCALE = 2.0
SCANS =113	T-OFST =36
SPAN =25	R-SLEW ON
CIRC FROM	CIRC TO
AXIAL FROM	AXIAL TO

Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

File Analysis System Tools Layout Add Displays Help

Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG12HCAL00128 WED 13:51:42 JAN-31-2001 SG 12 ROW 1 COL 52 I006

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.20 v/d		span 25		rot 50

07H-

-1.73

1.73

35111

Vpp MxR Vmx GAn 180

0.53 volts 6 deg NBF

07H + 7.72

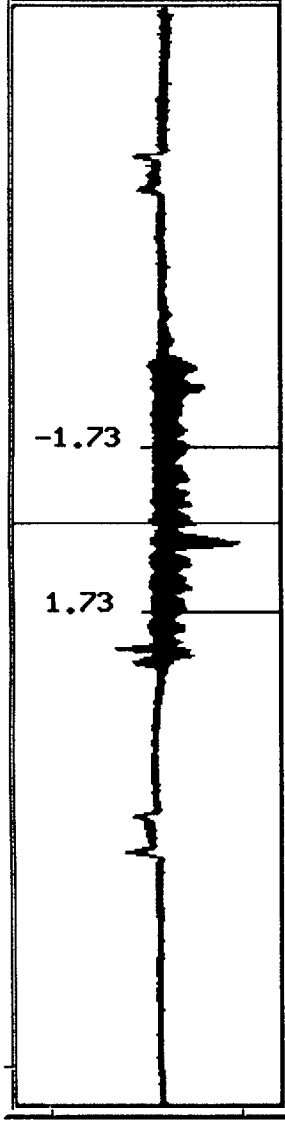
chan > <

SG12HCAL

File Layout

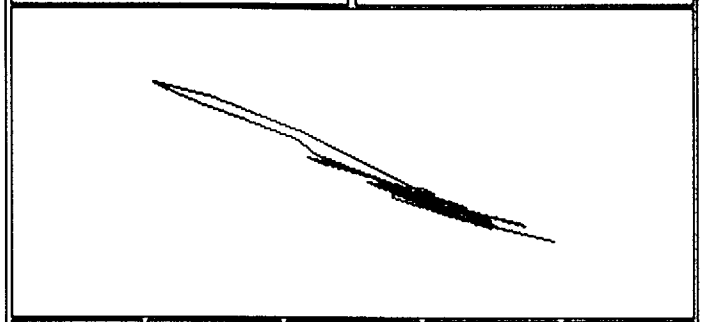
Null Dat

P2	300	+CIRC
G2	C1	Vert



AXIAL LIZ

SET VOLT UNITS | SET CAL CURVES

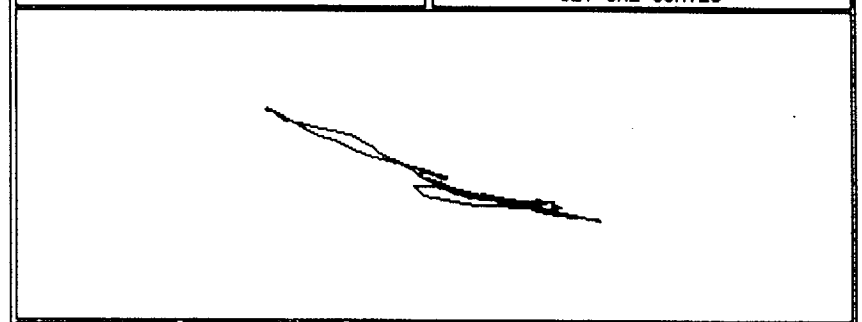


Vpp | MxR | Vmx | GA | 180

07H + 7.63

CIRC LIZ

SET VOLT UNITS | SET CAL CURVES



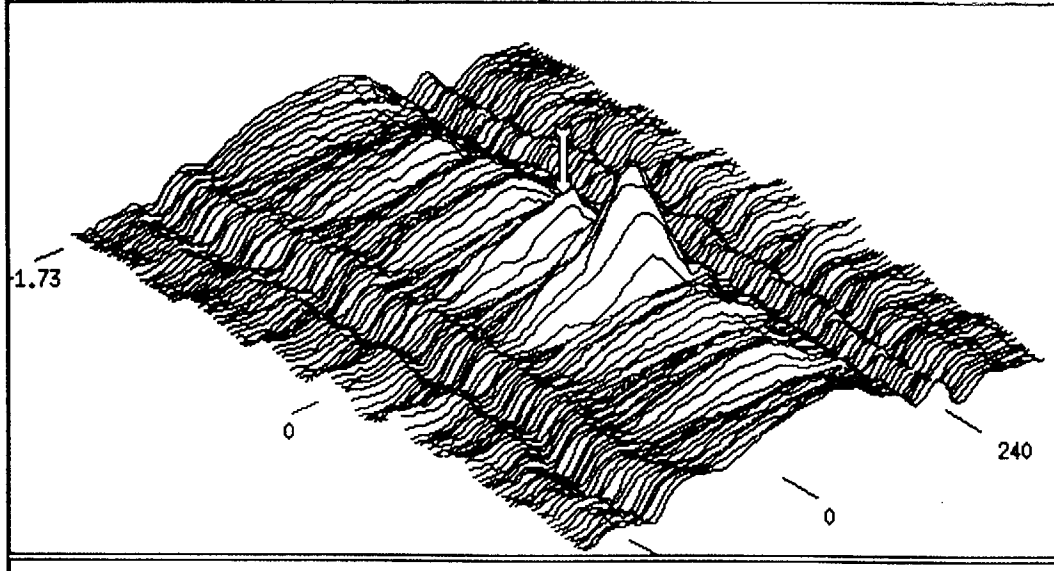
Vpp | MxR | Vmx | GA | 180

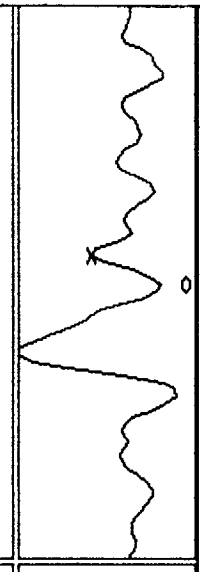
07H + 7.63

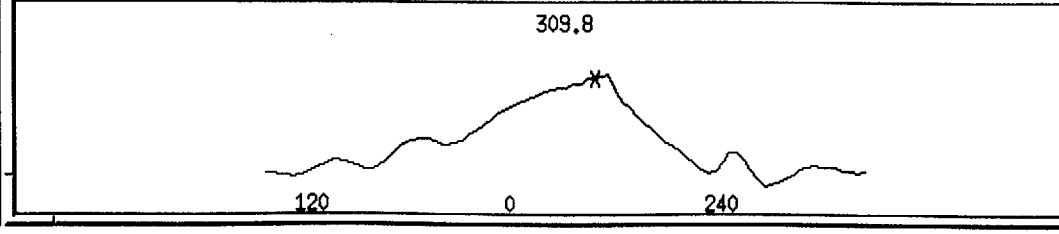
RPC: SG12HCAL00128WED 13:51:42 JAN-31-2001 SG 12 R 1 C 52 1006 [MB]

Filter:OFF Pts/Scan=86 XTrans=12 YTrans=0 XRot=60 ZRot=40

SHOW HIDDEN OFF | MAGNIFY OFF | HORZ PLOT OFF | CROSSHATCH OFF







CIRC NO MEAS

AXIAL NO MEAS

07H + 7.63

< CHAN >
P2:2 +CIRC

CSCAN <PLOT>	180 PLOT
CHAN (+/-)	USER SELECT
SCAN (+/-)	SCAN +/-85%
XSCALE = 2.0	YSCALE = 2.0
SCANS =113	T-OFST =36
SPAN =25	R-SLEW ON
CIRC FROM	CIRC TO
AXIAL FROM	AXIAL TO

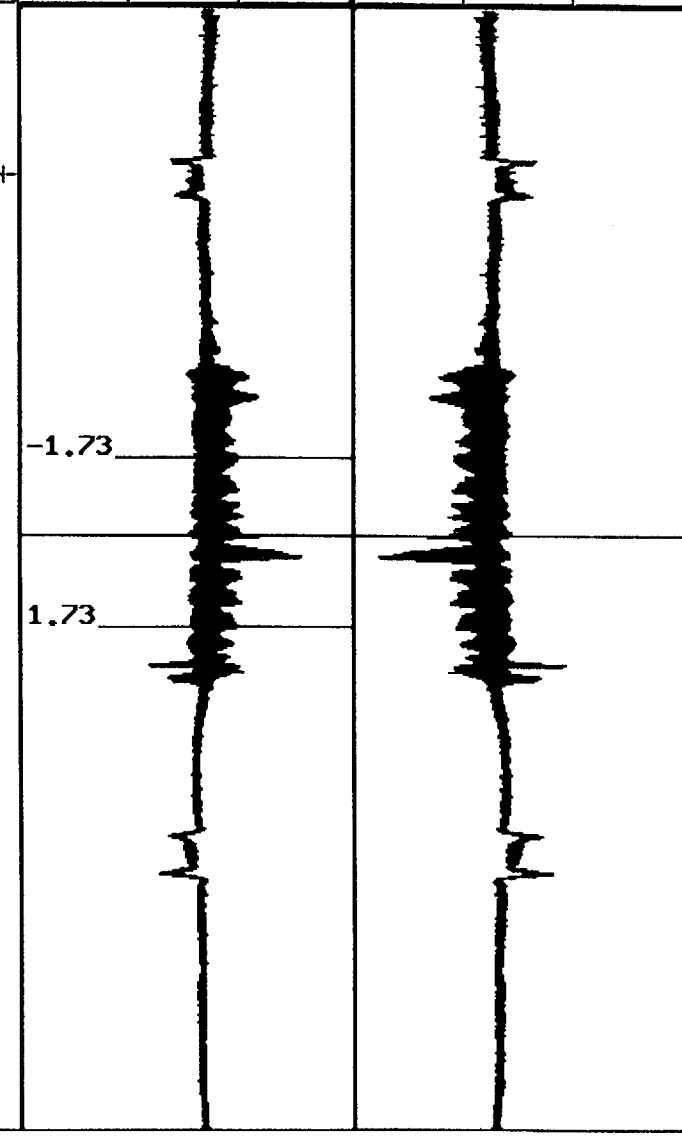
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

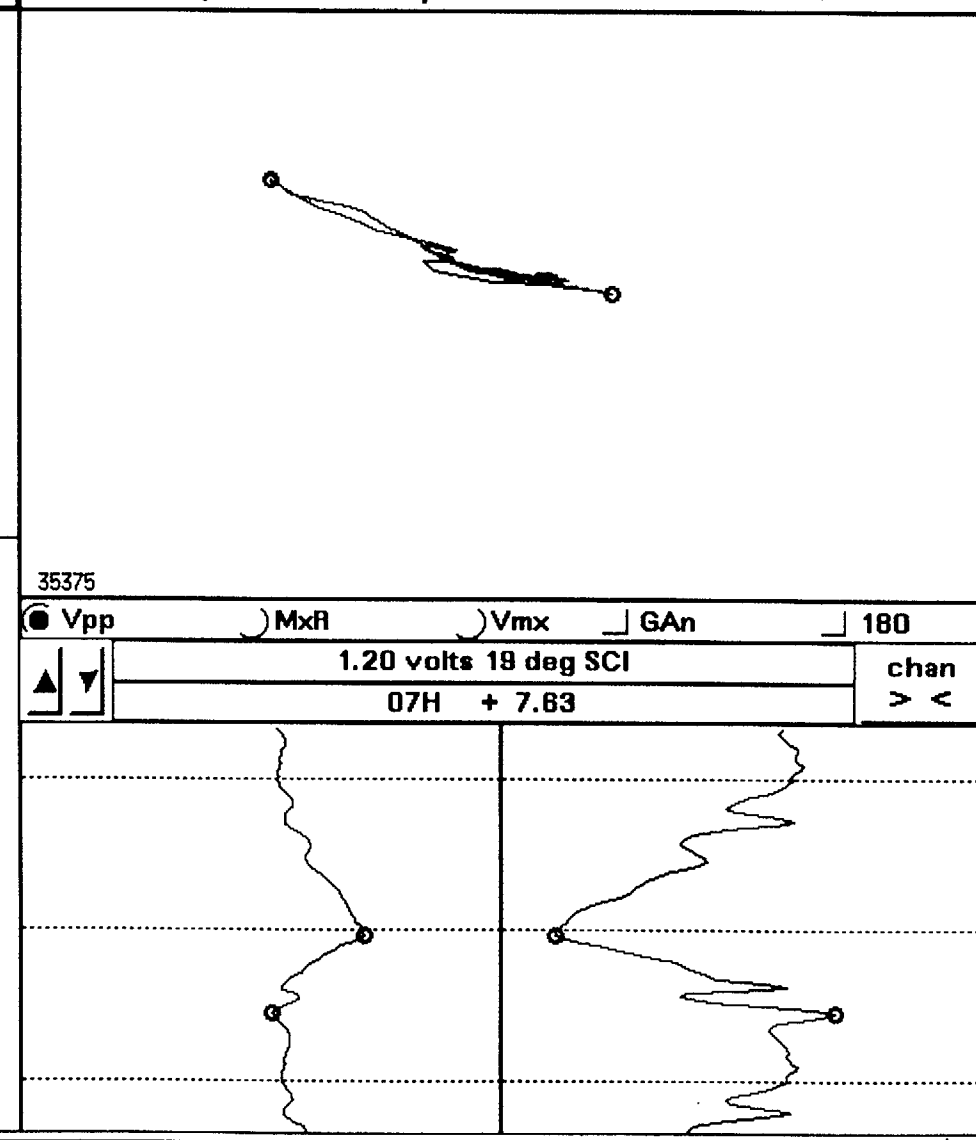
File Analysis System Tools Layout Add Displays Help

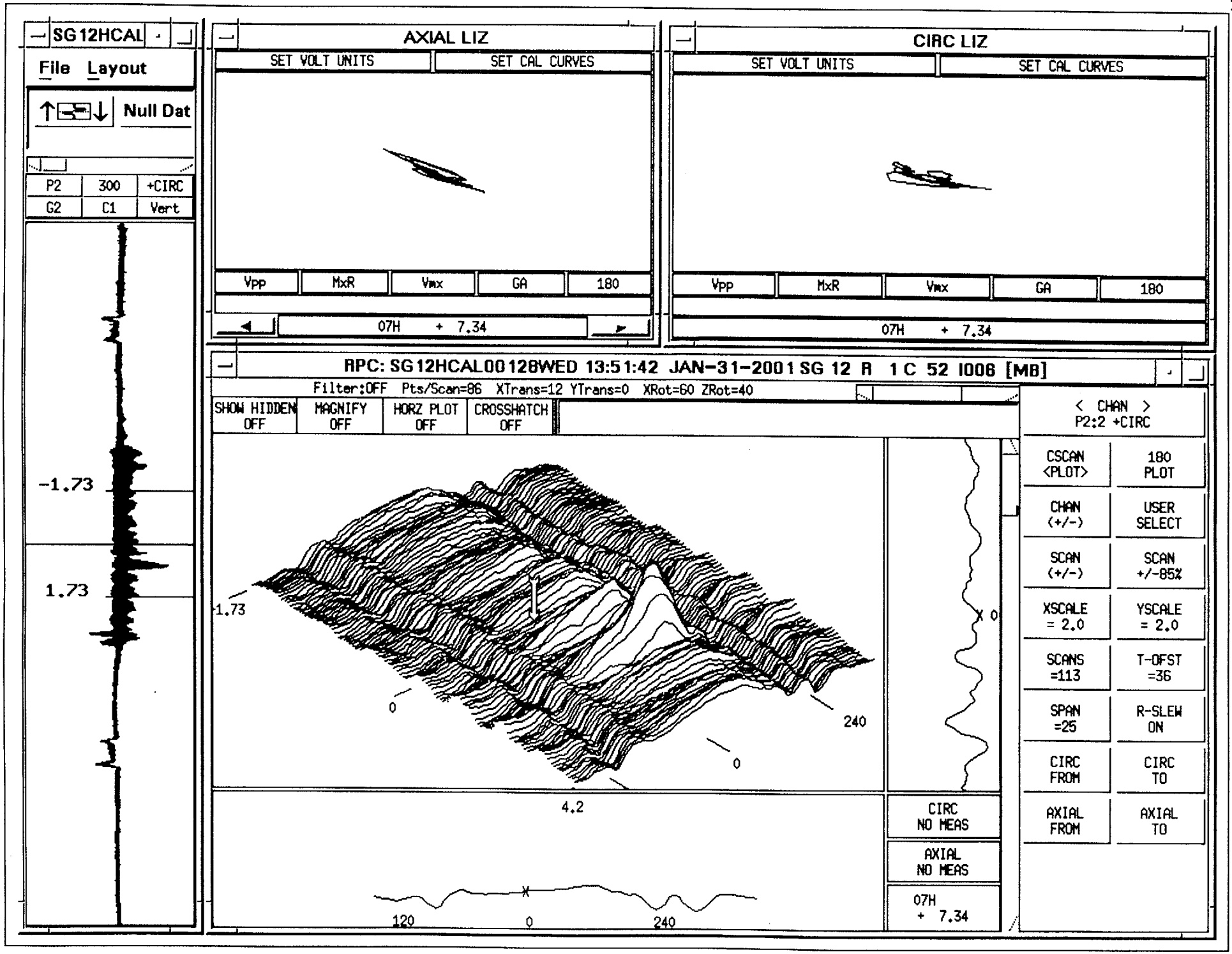
Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG12HCAL00128 WED 13:51:42 JAN-31-2001 SG 12 ROW 1 COL 52 I006

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.20 v/d		span 25		rot 50






SG12HCAL
File Layout
Null Dat
P2 300 +CIRC
G2 C1 Vert
-1.73
1.73
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 7.34
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 7.34
RPC: SG12HCAL00128WED 13:51:42 JAN-31-2001 SG 12 R 1 C 52 1006 [MB]
Filter:OFF Pts/Scan=86 XTrans=12 YTrans=0 XRot=60 ZRot=40
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
-1.73
0
240
0
4.2
120
0
240
CIRC NO MEAS
AXIAL NO MEAS
07H + 7.34
< CHAN >
P2:2 +CIRC
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =113
T-OFST =36
SPAN =25
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

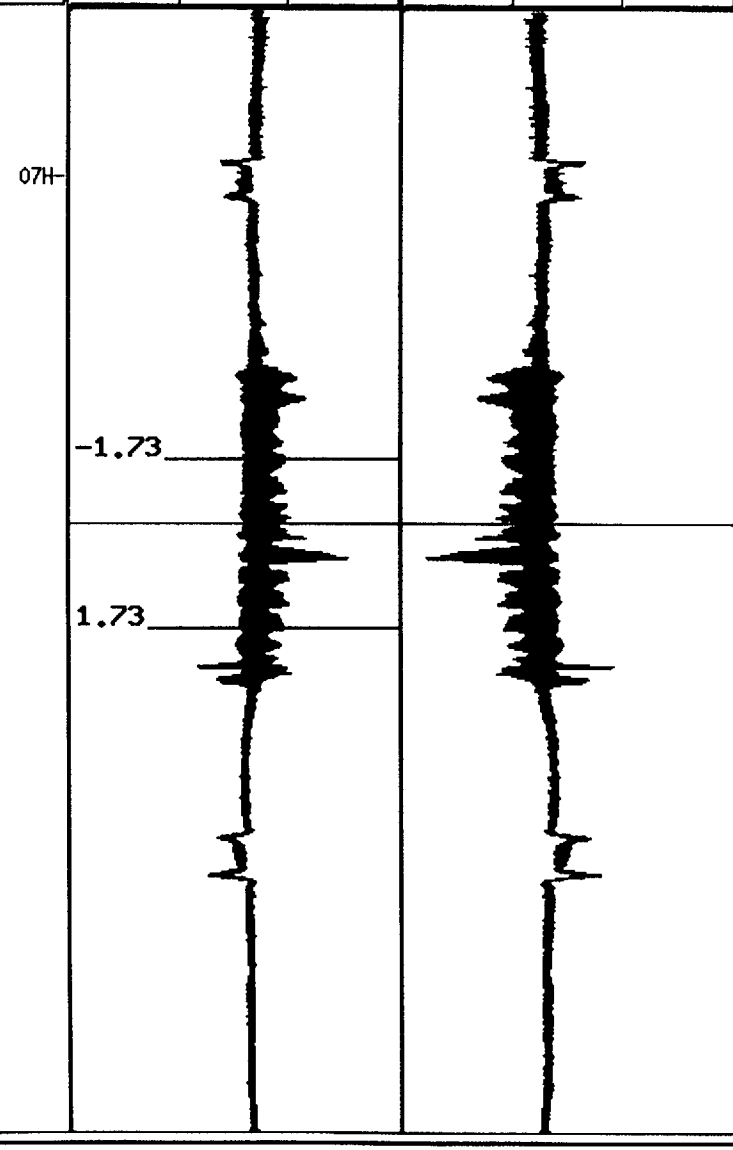
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

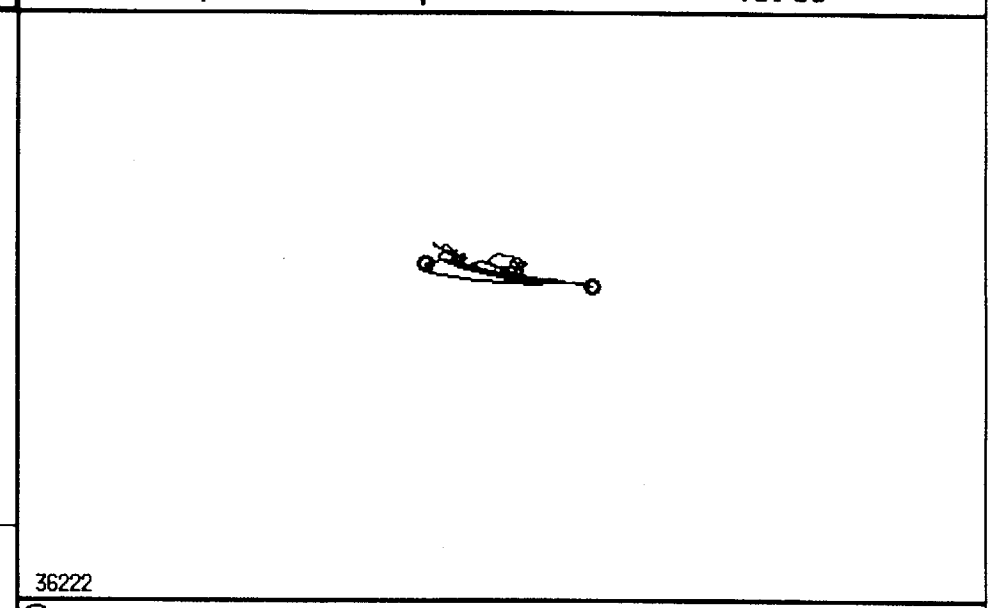
File Analysis System Tools Layout Add Displays Help

Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG12HCAL00128 WED 13:51:42 JAN-31-2001 SG 12 ROW 1 COL 52 I006

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.20 v/d		span 25		rot 50



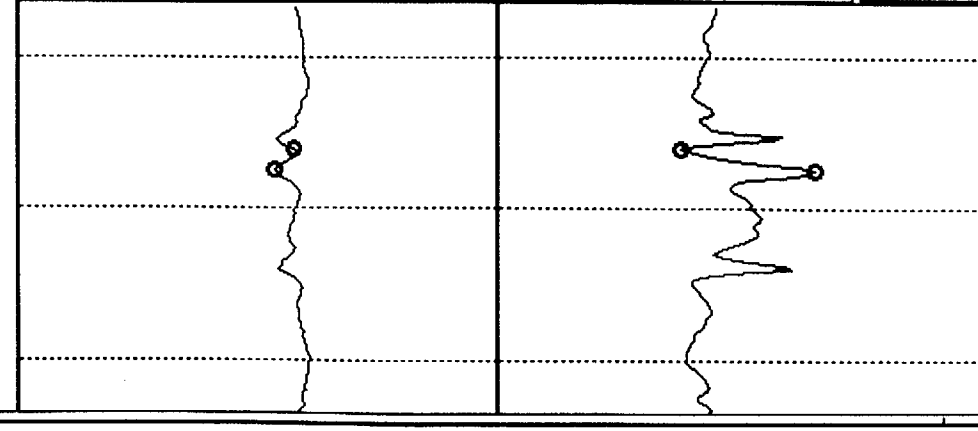


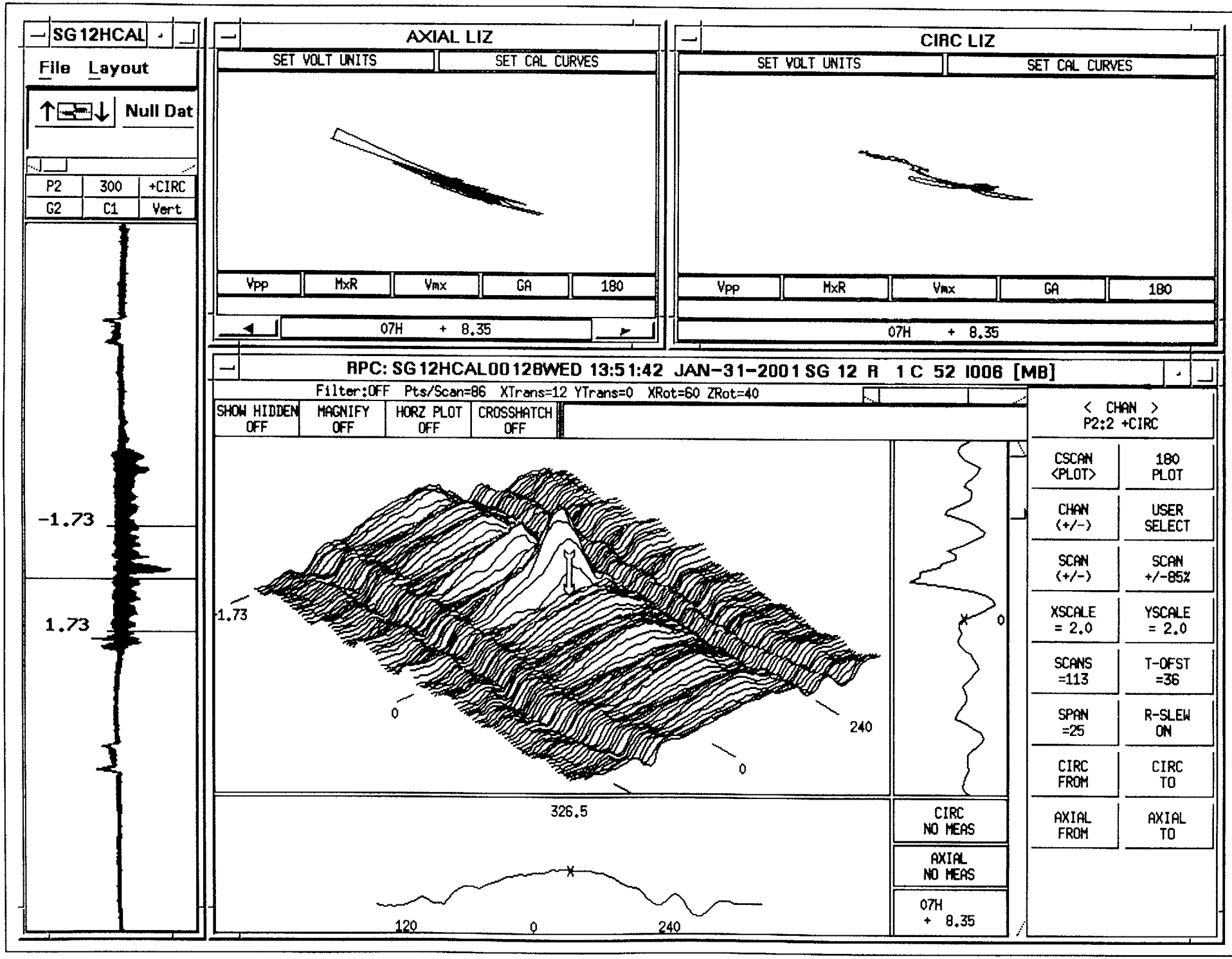
Vpp MxR Vmx GAn 180

0.55 volts 8 deg NAF

07H + 7.33

chan > <




SG12HCAL
File Layout
Null Dat
P2 300 +CIRC
G2 C1 Vert
-1.73
1.73
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 8.35
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
07H + 8.35
RPC: SG12HCAL00128WED 13:51:42 JAN-31-2001 SG 12 R 1 C 52 1006 [MB]
Filter:OFF Pts/Scan=86 XTrans=12 YTrans=0 XRot=60 ZRot=40
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
-1.73
0
240
0
0
326.5
120
0
240
CIRC NO MEAS
AXIAL NO MEAS
07H + 8.35
< CHAN >
P2:2 +CIRC
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =113
T-OFST =36
SPAN =25
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

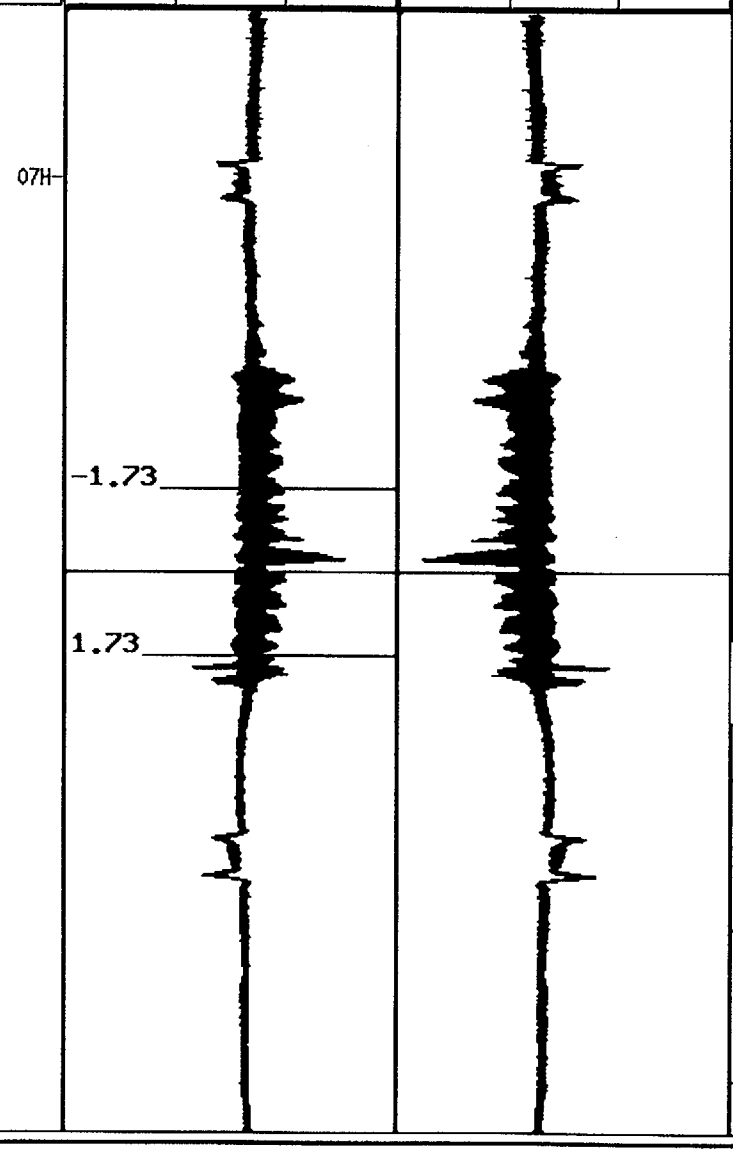
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

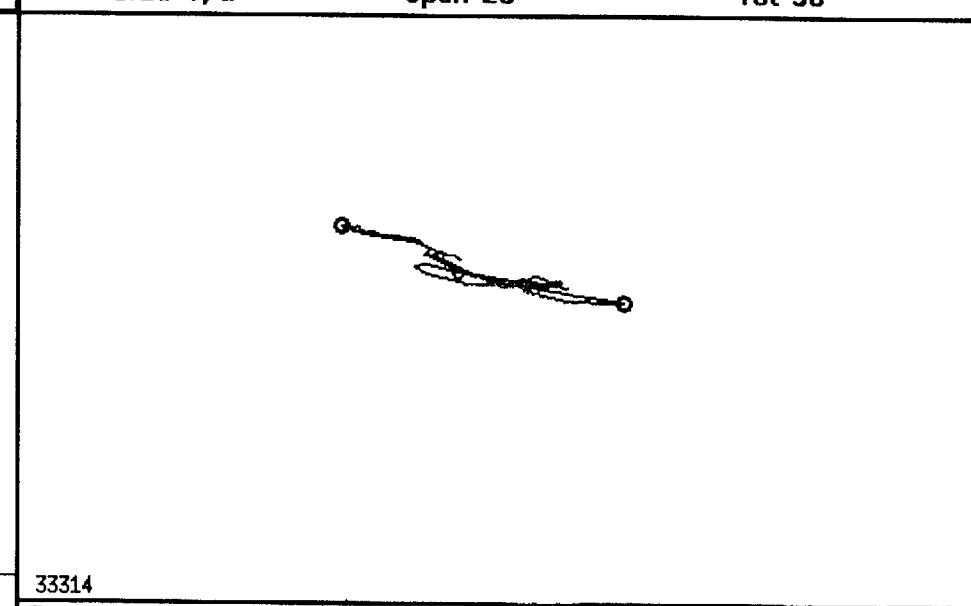
File Analysis System Tools Layout Add Displays Help

Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG12HCAL00128 WED 13:51:42 JAN-31-2001 SG 12 ROW 1 COL 52 I006

< Lmrks >	P2	300	+CIRC	2	300	+AX	P2:2	300	G2	C1	+CIRC
Clear	G2	C1	Vert	G2	C1	Vert	0.20 v/d		span 25		rot 50



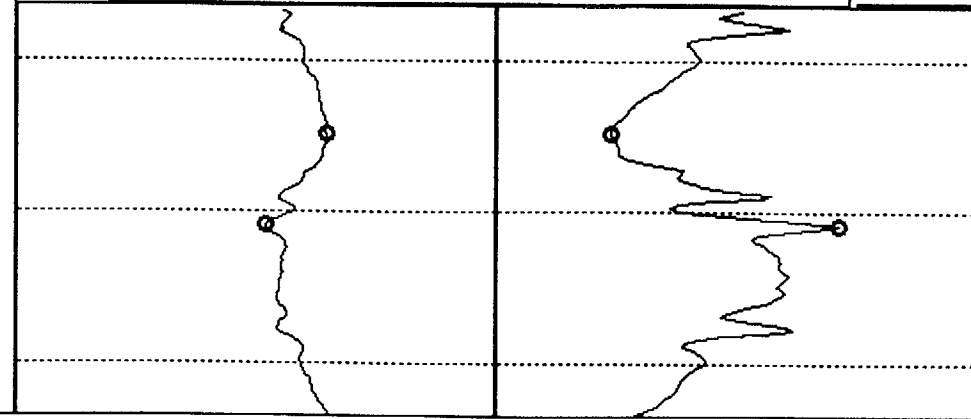


Vpp MxR Vmx GAn 180

0.97 volts 15 deg NM

07H + 8.36

chan > <



FILE: /mnt/server3_results/science/SG12HCAL00004 ANALYST: F3453 DATE: WED FEB. 7,2001 15:01 L PRE
Disk Label= Unknown L INSITU

12	10	9	0.17	15	NBF	3	TRH	+0.45	TEHTSH	VPP	F3453	science	DHR010C009I074	0
12	10	9	0.08	0	NBF	3	TRH	+0.45	TEHTSH	VM	F3453	science	DHR010C009I074	1
12	10	9	0.10	141	MAI	3	TRH	+2.56	TEHTSH	VPP	F3453	science	DHR010C009I074	2
12	10	9	0.07	0	MAI	3	TRH	+2.56	TEHTSH	VMX	F3453	science	DHR010C009I074	3
12	10	9	0.11	349	NAF	3	TRH	+10.09	TEHTSH	VPP	F3453	science	DHR010C009I074	4
12	10	9	0.06	0	NAF	3	TRH	+10.09	TEHTSH	VM	F3453	science	DHR010C009I074	5
12	10	9	0.22	16	NM	3	TRH	+15.75	TEHTSH	VPP	F3453	science	DHR010C009I074	6
12	10	9	0.09	0	NM	3	TRH	+15.75	TEHTSH	VMX	F3453	science	DHR010C009I074	7

300 KHZ

R10 e 9

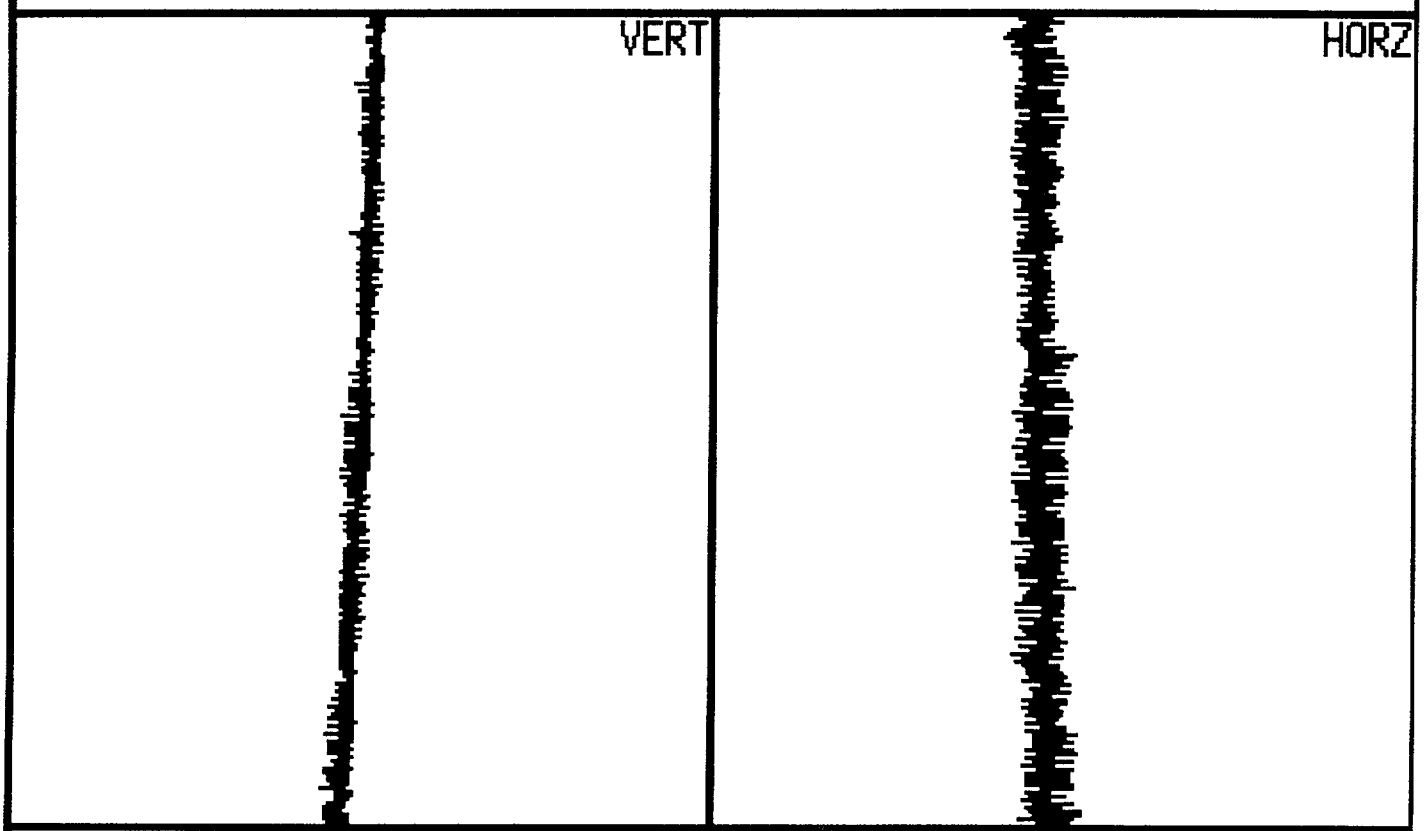
ODSCE TUBESHEET

PRE INSITU

R10 C9 PRE INSITU

SNR WIDGET

NOISE ONLY | DIFF SIGNL | AXIAL FLAW | FIND SIGNAL END PTS | SET NOISE START | SET NOISE END



NOISE RMS

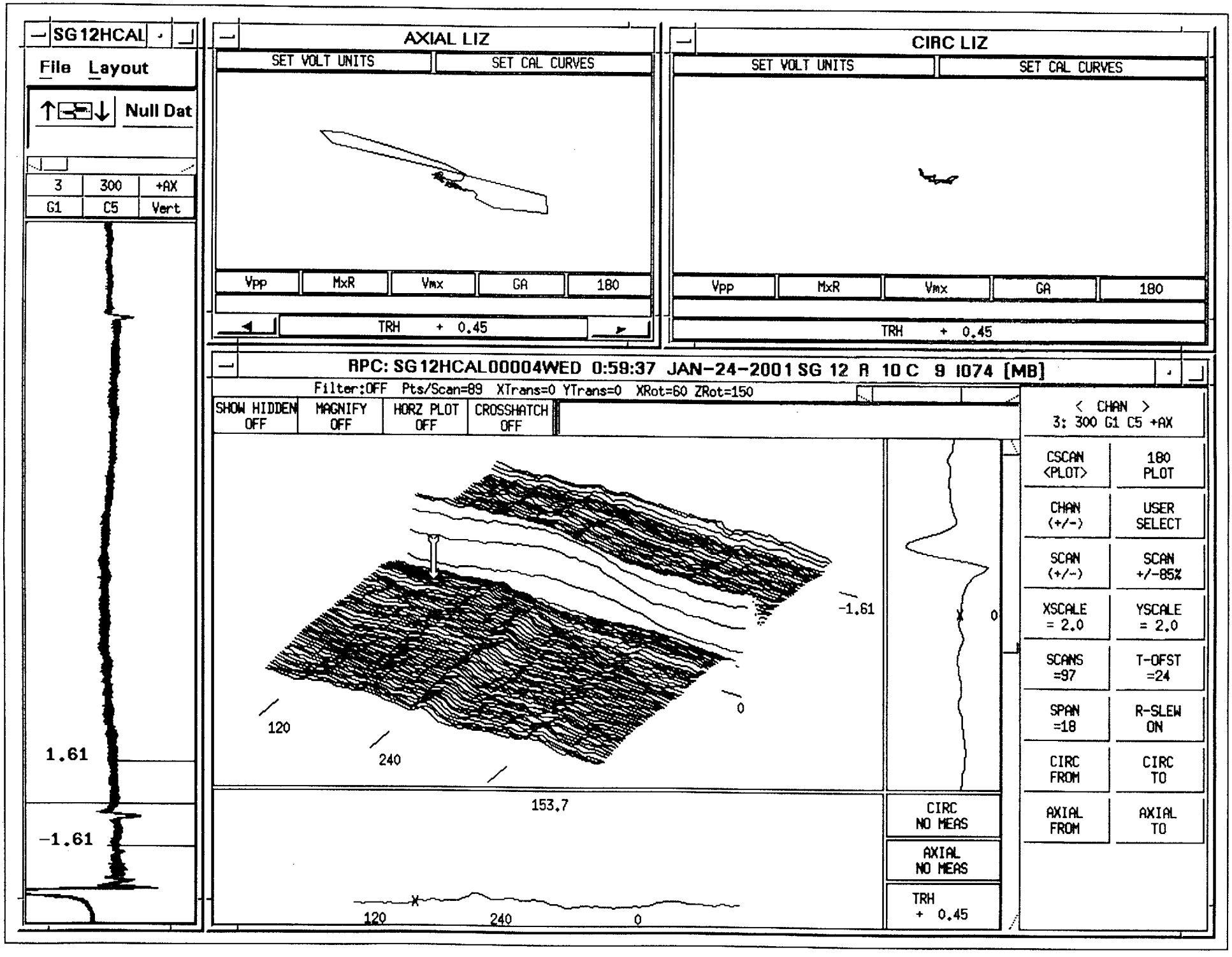
T: 0.04v

V: 0.03v

H: 0.03v

Total Data Pts: 10696

PLOT DATA | SHOW NOISE | DONE


SG12HCAL
File Layout
Null Dat
3 300 +AX
G1 C5 Vert
1.61
-1.61
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 0.45
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 0.45
RPC: SG12HCAL00004WED 0:59:37 JAN-24-2001 SG 12 R 10 C 9 1074 [MB]
Filter:OFF Pts/Scan=89 XTrans=0 YTrans=0 XRot=60 ZRot=150
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
-1.61
0
120
240
0
153.7
120
240
0
CIRC NO MEAS
AXIAL NO MEAS
TRH + 0.45
< CHAN >
3: 300 G1 C5 +AX
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =97
T-OFST =24
SPAN =18
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

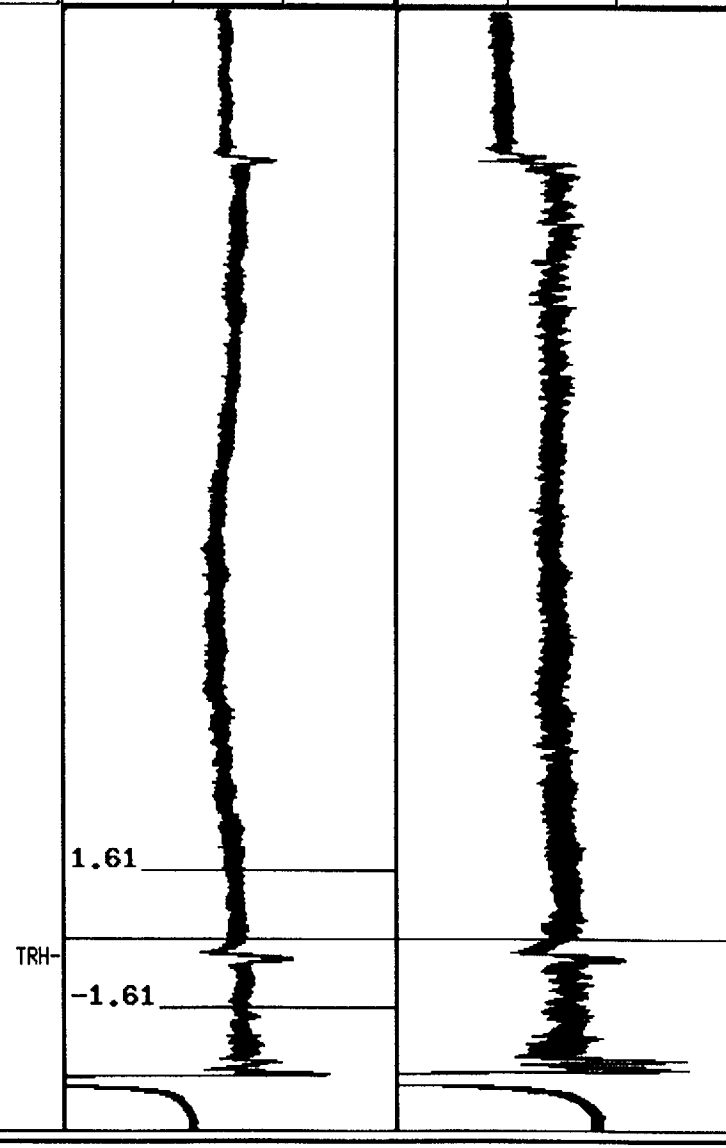
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

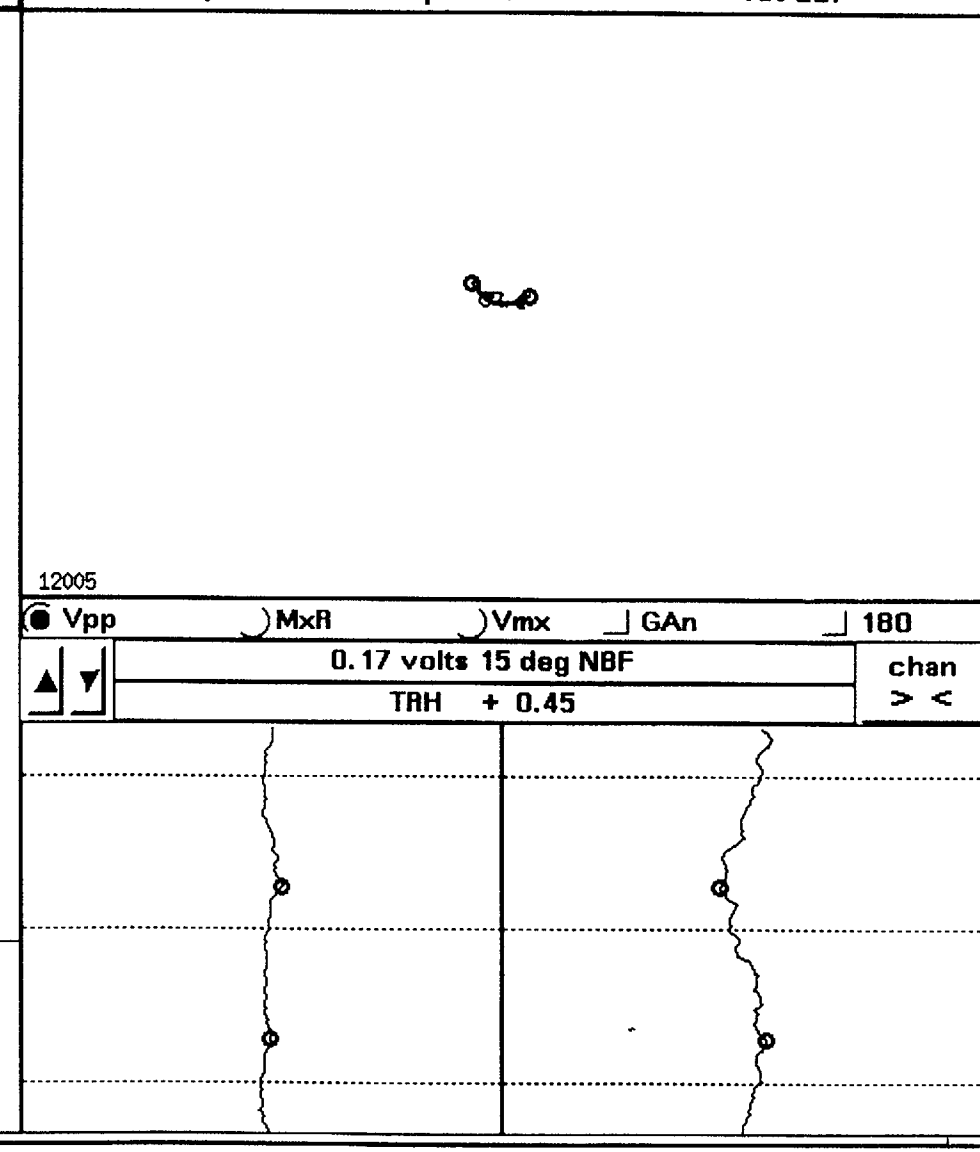
File Analysis System Tools Layout Add Displays Help

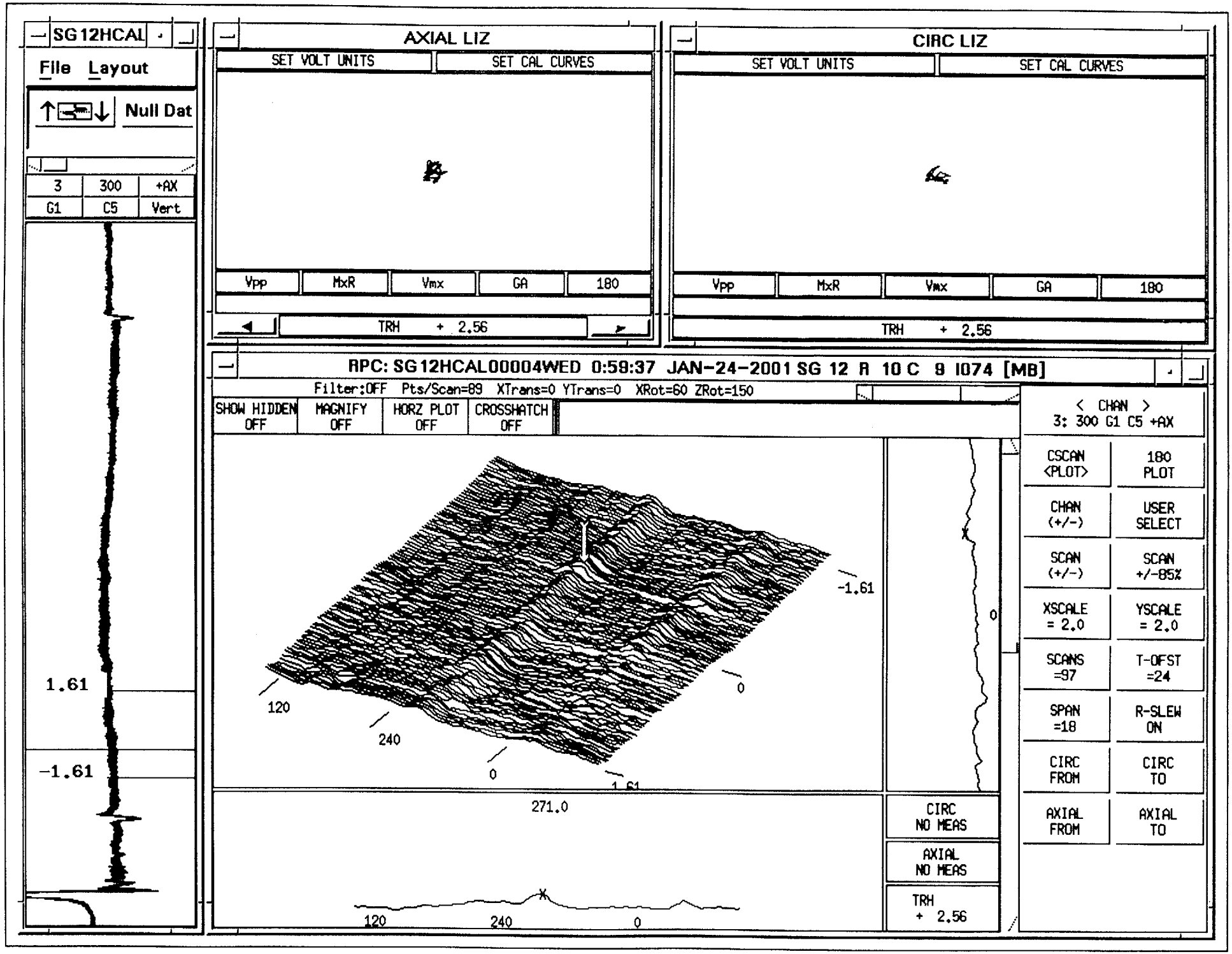
Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG12HCAL00004 WED 0:59:37 JAN-24-2001 SG 12 ROW 10 COL 9 I074

< Lmrks >	3	300	+AX	8	100	+AX	3:	300	G1	C5	+AX
Clear	G1	C5	Vert	G1	C5	Vert	0.17 v/d		span 18		rot 227






SG12HCAL
File Layout
Null Dat
3 300 +AX
G1 C5 Vert
1.61
-1.61
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 2.56
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 2.56
RPC: SG12HCAL00004WED 0:59:37 JAN-24-2001 SG 12 R 10 C 9 1074 [MB]
Filter:OFF Pts/Scan=89 XTrans=0 YTrans=0 XRot=60 ZRot=150
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
-1.61
0
120
240
0
1.61
271.0
120
240
0
CIRC NO MEAS
AXIAL NO MEAS
TRH + 2.56
< CHAN >
3: 300 G1 C5 +AX
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =97
T-OFST =24
SPAN =18
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

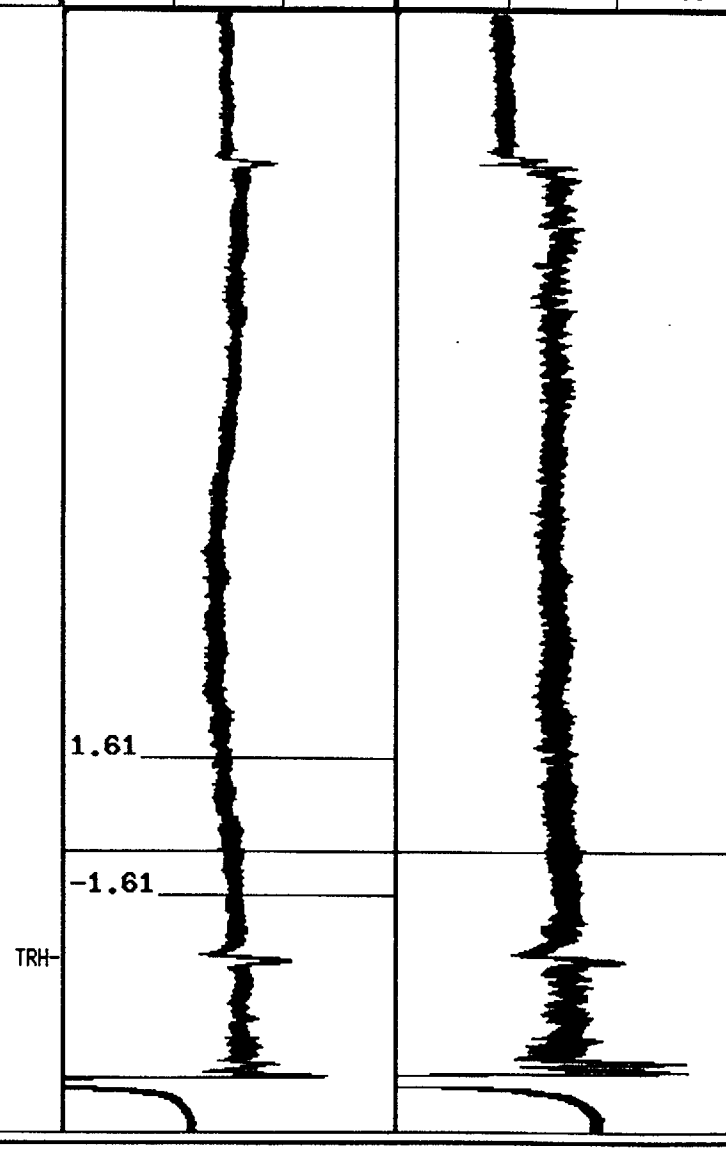
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

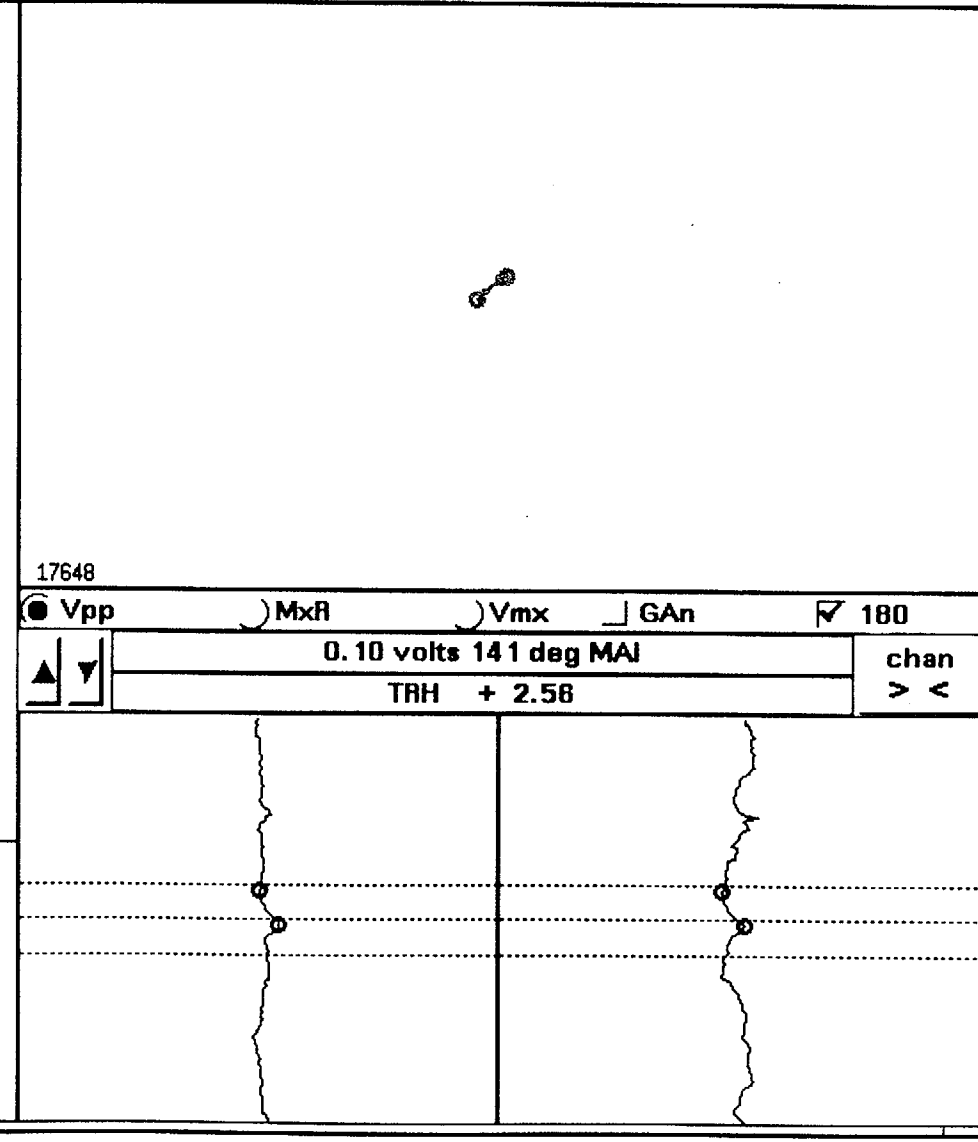
File Analysis System Tools Layout Add Displays Help

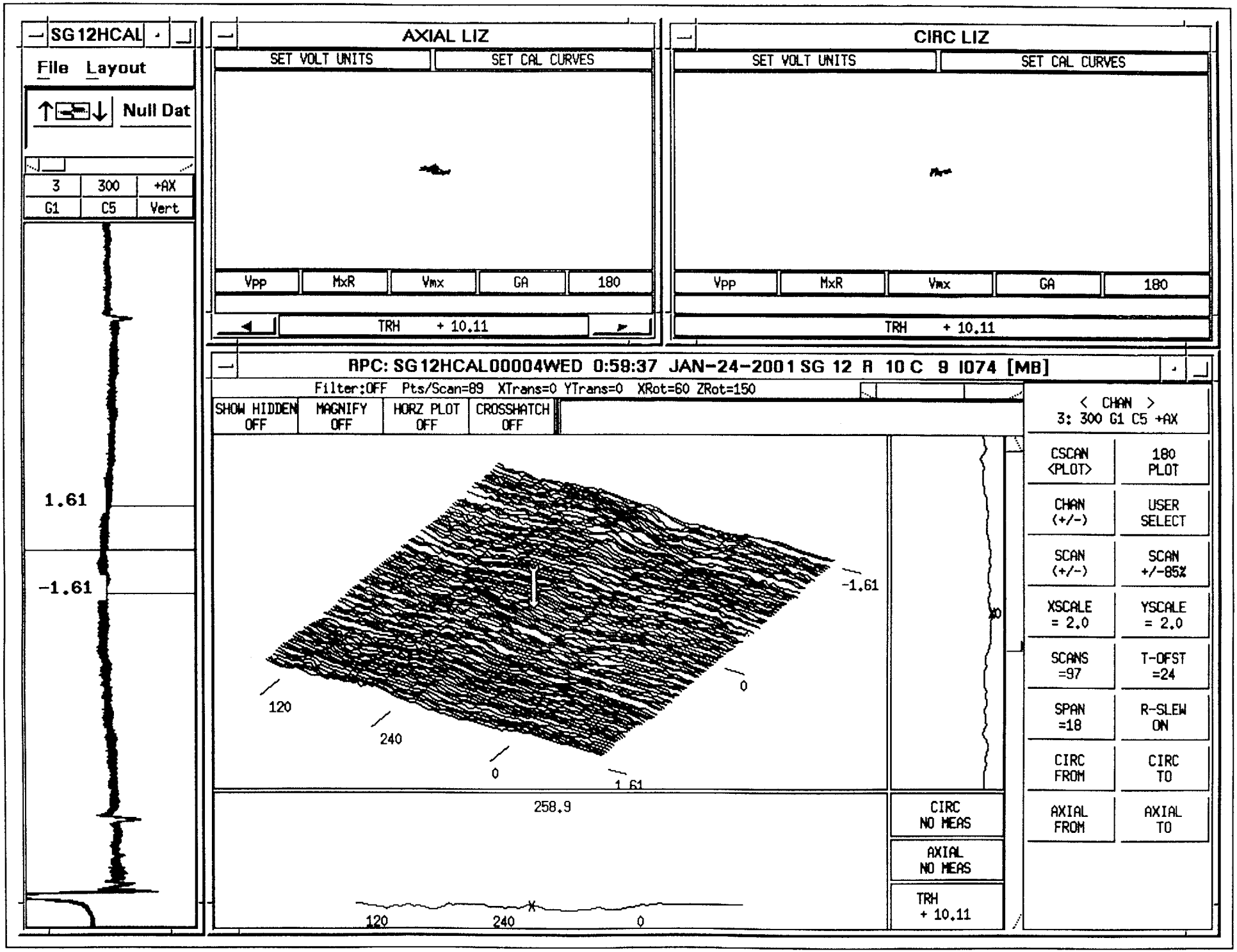
Tube Comment: NDD NBF NBF NAF NAF

SG12HCAL00004 WED 0:59:37 JAN-24-2001 SG 12 ROW 10 COL 9 I074

< Lmrks >	3	300	+AX	8	100	+AX	3:	300	G1	C5	+AX
Clear	G1	C5	Vert	G1	C5	Vert	0.17 v/d		span 18		rot 227






SG12HCAL
File Layout
Null Dat
3 300 +AX
G1 C5 Vert
1.61
-1.61
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 10.11
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 10.11
RPC: SG12HCAL00004WED 0:59:37 JAN-24-2001 SG 12 R 10 C 9 I074 [MB]
Filter:OFF Pts/Scan=89 XTrans=0 YTrans=0 XRot=60 ZRot=150
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
-1.61
120
240
0
0
1.61
258.9
120
240
0
CIRC NO MEAS
AXIAL NO MEAS
TRH + 10.11
< CHAN >
3: 300 G1 C5 +AX
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =97
T-OFST =24
SPAN =18
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

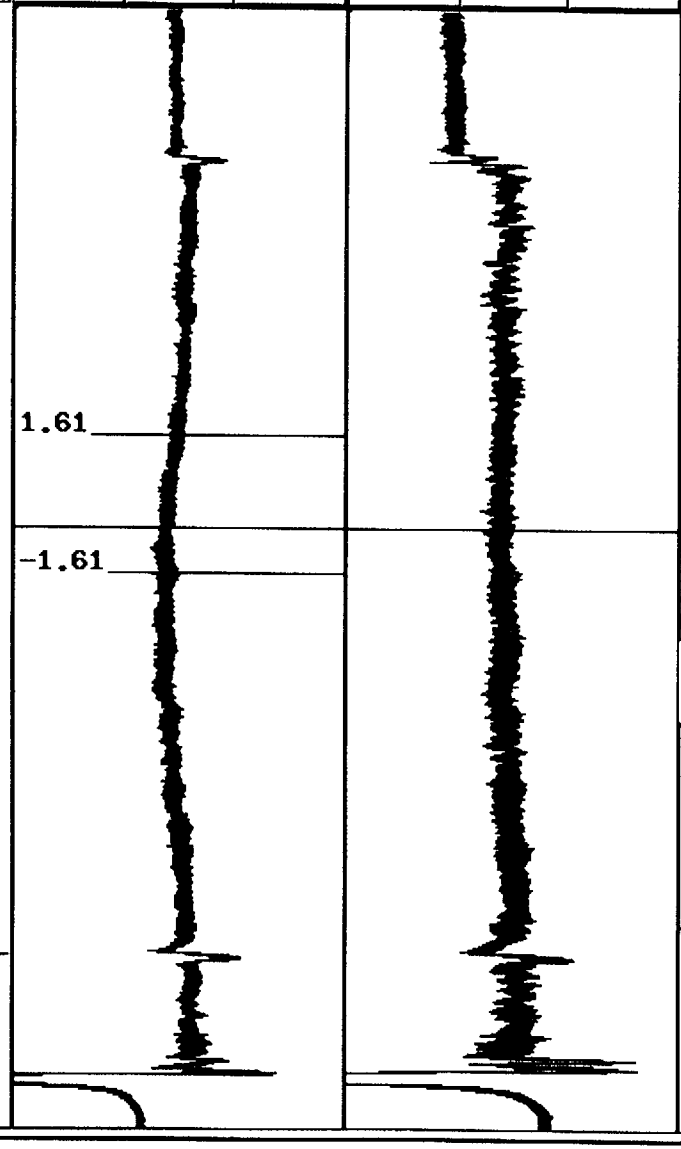
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

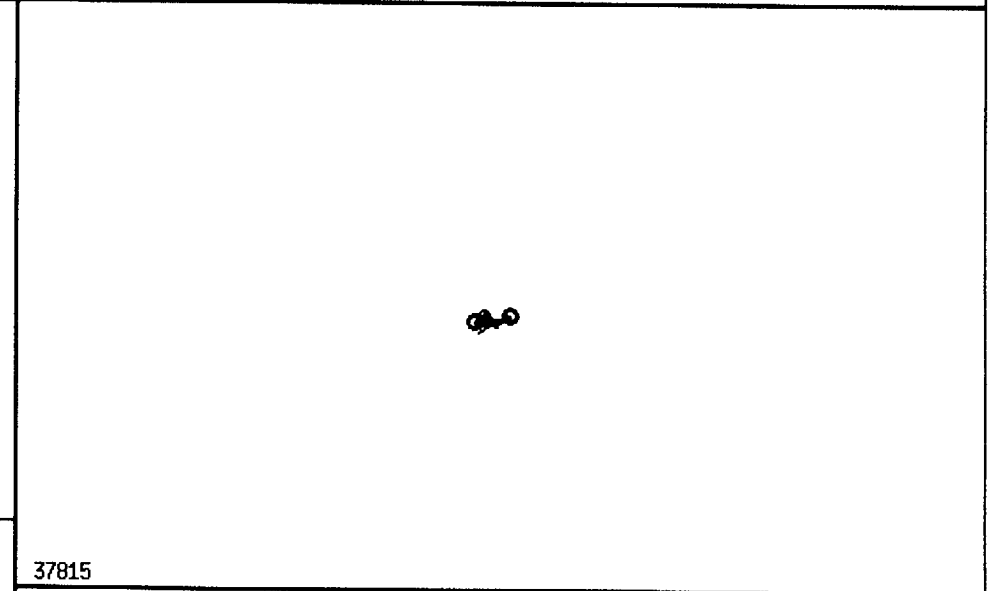
File Analysis System Tools Layout Add Displays Help

Tube Comment: NDD NBF NBF NAF NAF

SG12HCAL00004 WED 0:59:37 JAN-24-2001 SG 12 ROW 10 COL 9 I074

< Lmrks >	3	300	+AX	8	100	+AX	3:	300	G1	C5	+AX
Clear	G1	C5	Vert	G1	C5	Vert	0.17 v/d		span 18		rot 227



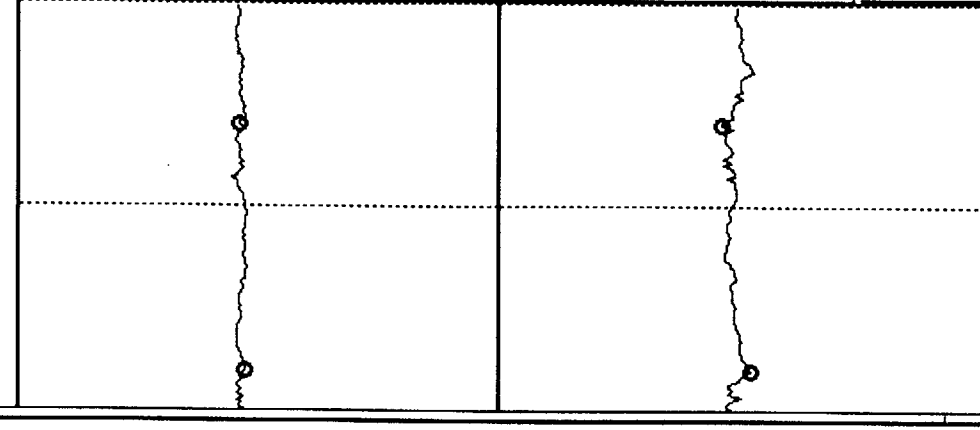


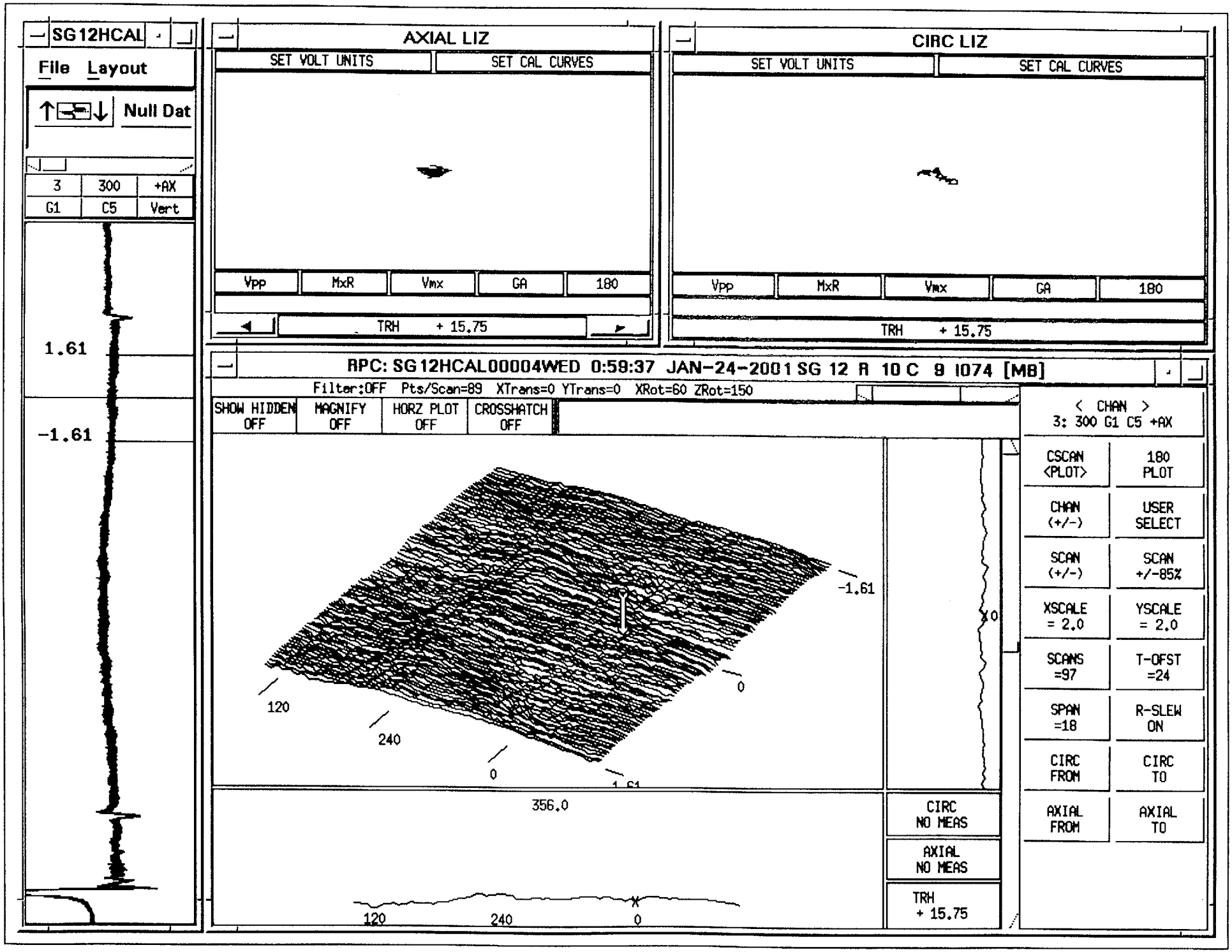
Vpp MxR Vmx GAn 180

0.11 volts 349 deg NAF

TRH + 10.09

chan > <




SG12HCAL
File Layout
Null Dat
3 300 +AX
G1 C5 Vert
1.61
-1.61
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 15.75
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 15.75
RPC: SG12HCAL00004WED 0:59:37 JAN-24-2001 SG 12 R 10 C 9 1074 [MB]
Filter:OFF Pts/Scan=89 XTrans=0 YTrans=0 XRot=60 ZRot=150
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
-1.61
120
240
0
0
356.0
120
240
0
CIRC NO MEAS
AXIAL NO MEAS
TRH + 15.75
< CHAN >
3: 300 G1 C5 +AX
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =97
T-OFST =24
SPAN =18
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

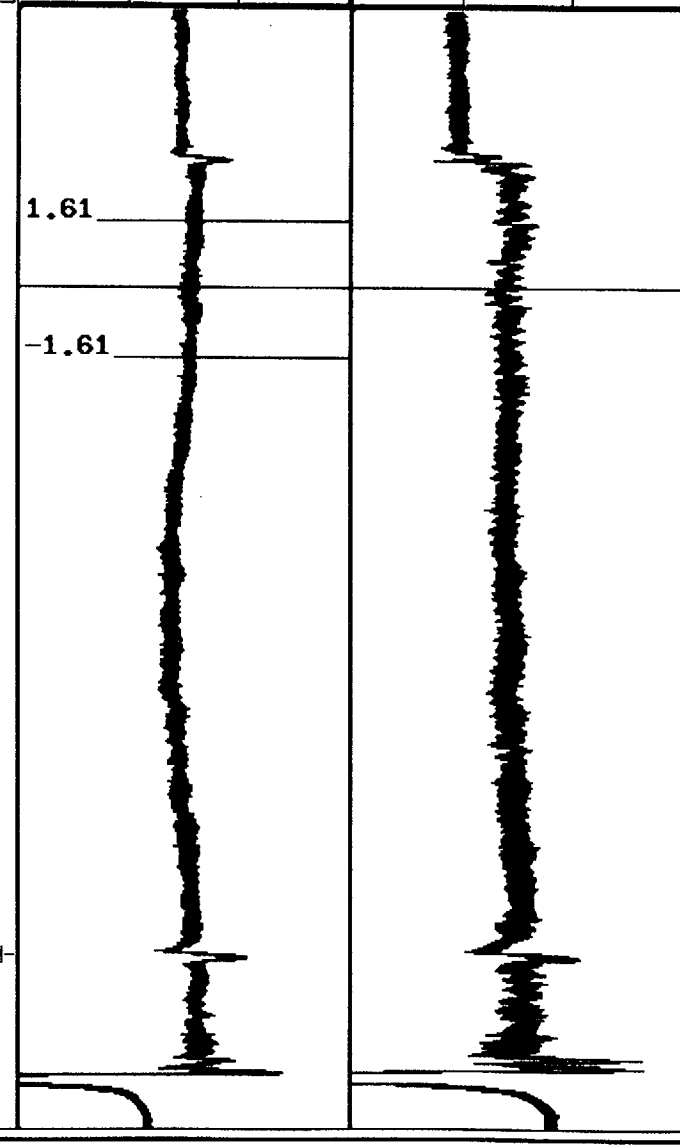
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

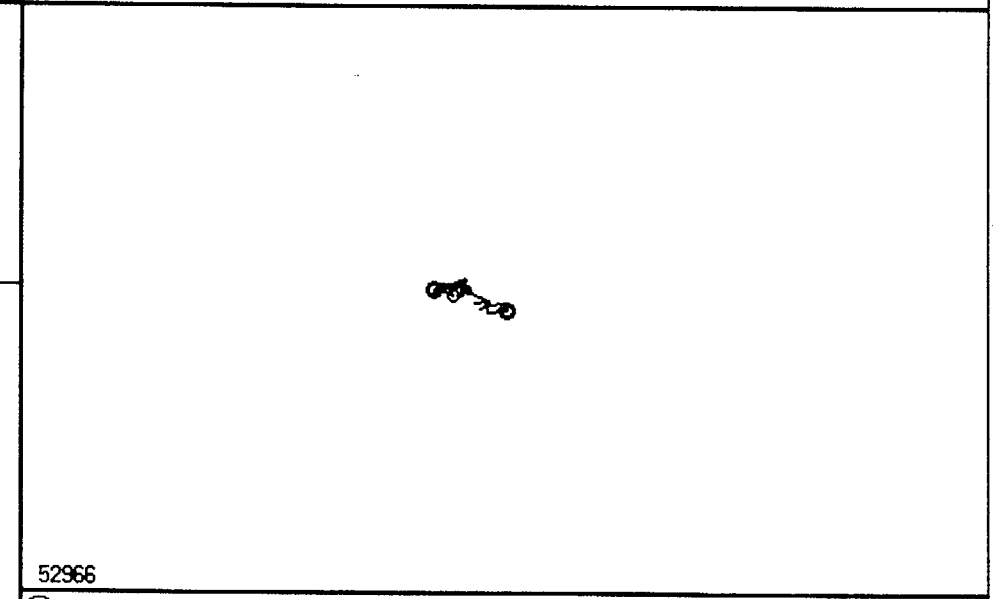
File Analysis System Tools Layout Add Displays Help

Tube Comment: NDD NBF NBF NAF NAF

SG12HCAL00004 WED 0:59:37 JAN-24-2001 SG 12 ROW 10 COL 9 I074

< Lmrks >	3	300	+AX	8	100	+AX	3:	300	G1	C5	+AX
Clear	G1	C5	Vert	G1	C5	Vert	0.17 v/d		span 18		rot 227



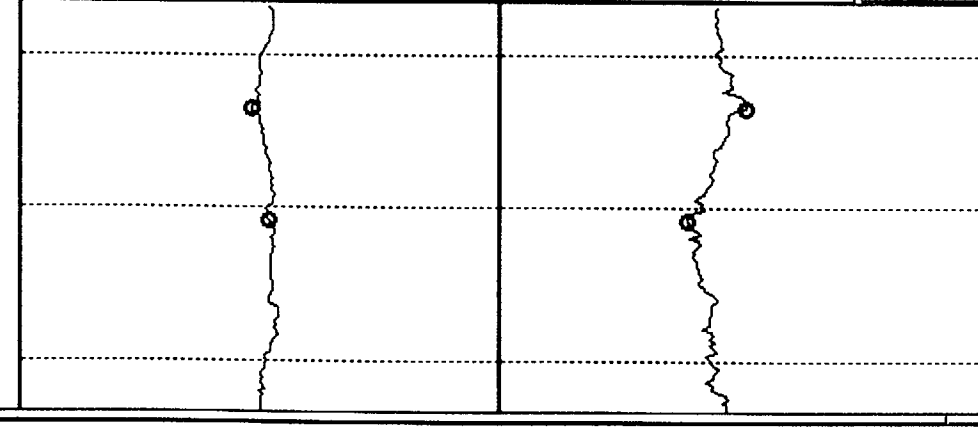


Vpp MxR Vmx GAn 180

0.22 volts 16 deg NM

TRH + 15.75

chan > <



Post

FILE: /mnt/server3_results/science/SG12HCAL00127 ANALYST: F3453 DATE: WED FEB. 7,2001 15:36 L

Disk Label= Unknown L INSITU

12	10	9	0.16	20	NBF	3	TRH	+0.33	TEHTSH	VPP	F3453	science	DHR010C0091006	0
12	10	9	0.06	0	NBF	3	TRH	+0.33	TEHTSH	VM	F3453	science	DHR010C0091006	1
12	10	9	0.23	133	MAI	3	TRH	+2.55	TEHTSH	VPP	F3453	science	DHR010C0091006	2
12	10	9	0.17	0	MAI	3	TRH	+2.55	TEHTSH	VMX	F3453	science	DHR010C0091006	3
12	10	9	0.13	22	NAF	3	TRH	+10.61	TEHTSH	VPP	F3453	science	DHR010C0091006	4
12	10	9	0.06	0	NAF	3	TRH	+10.61	TEHTSH	VM	F3453	science	DHR010C0091006	5
12	10	9	0.16	18	NM	3	TRH	+16.12	TEHTSH	VPP	F3453	science	DHR010C0091006	6
12	10	9	0.05	0	NM	3	TRH	+16.12	TEHTSH	VMX	F3453	science	DHR010C0091006	7

300 KHZ

R 10 C 9

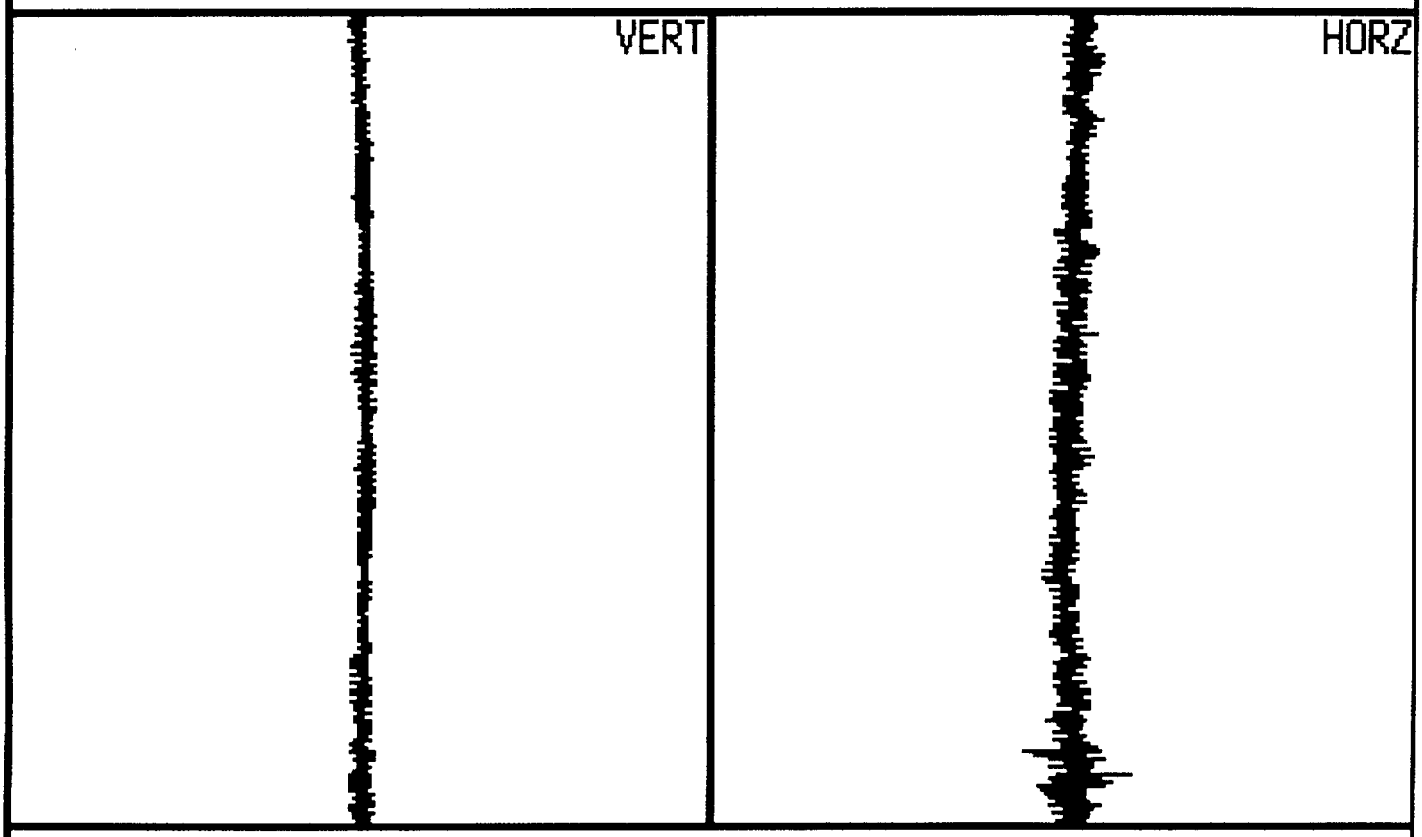
ODSCC TUBESHEET

POST INSITU

R10C9 POST INSITU

SNR WIDGET

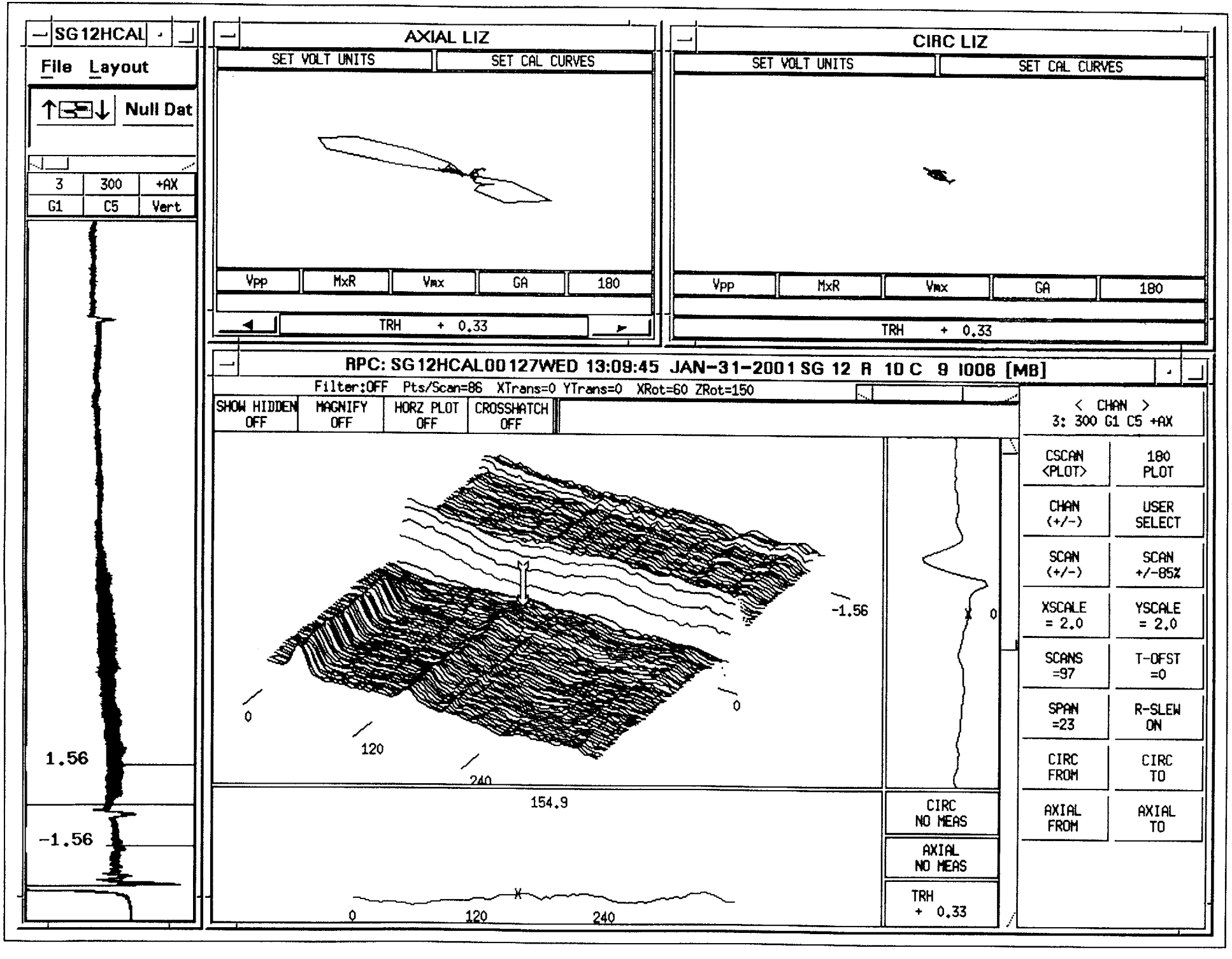
NOISE ONLY | DIFF SIGNL | AXIAL FLAW | FIND SIGNAL END PTS | SET NOISE START | SET NOISE END



	NOISE RMS
T:	0.03v
V:	0.01v
H:	0.02v

Total Data Pts: 10709

PLOT DATA | SHOW NOISE | DONE


SG12HCAL
File Layout
Null Dat
3 300 +AX
G1 C5 Vert
1.56
-1.56
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 0.33
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 0.33
RPC: SG12HCAL00127WED 13:09:45 JAN-31-2001 SG 12 R 10 C 9 1006 [MB]
Filter:OFF Pts/Scan=86 XTrans=0 YTrans=0 XRot=60 ZRot=150
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
-1.56
0
0
120
240
154.9
0
120
240
CIRC NO MEAS
AXIAL NO MEAS
TRH + 0.33
< CHAN >
3: 300 G1 C5 +AX
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =97
T-OFST =0
SPAN =23
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

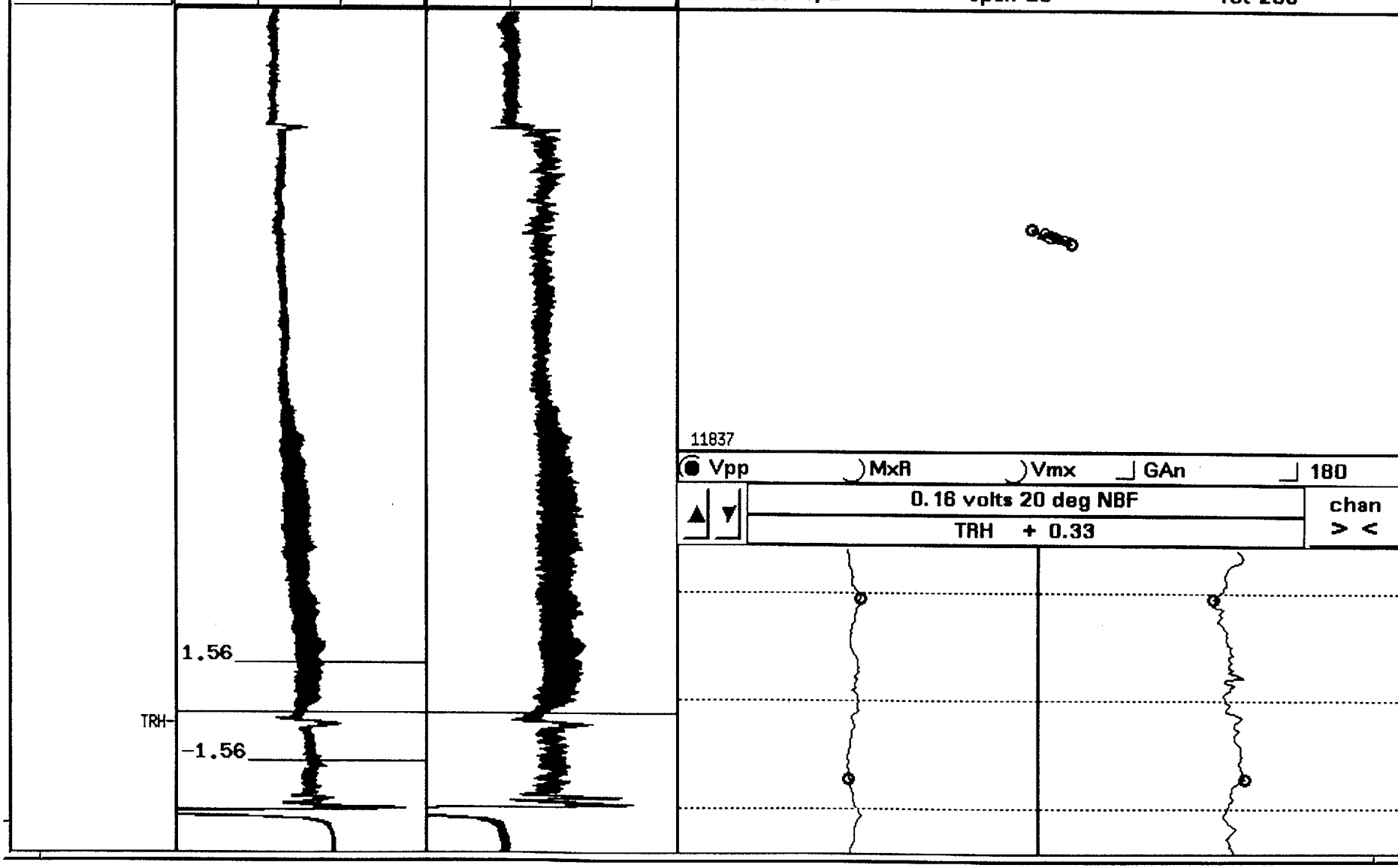
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

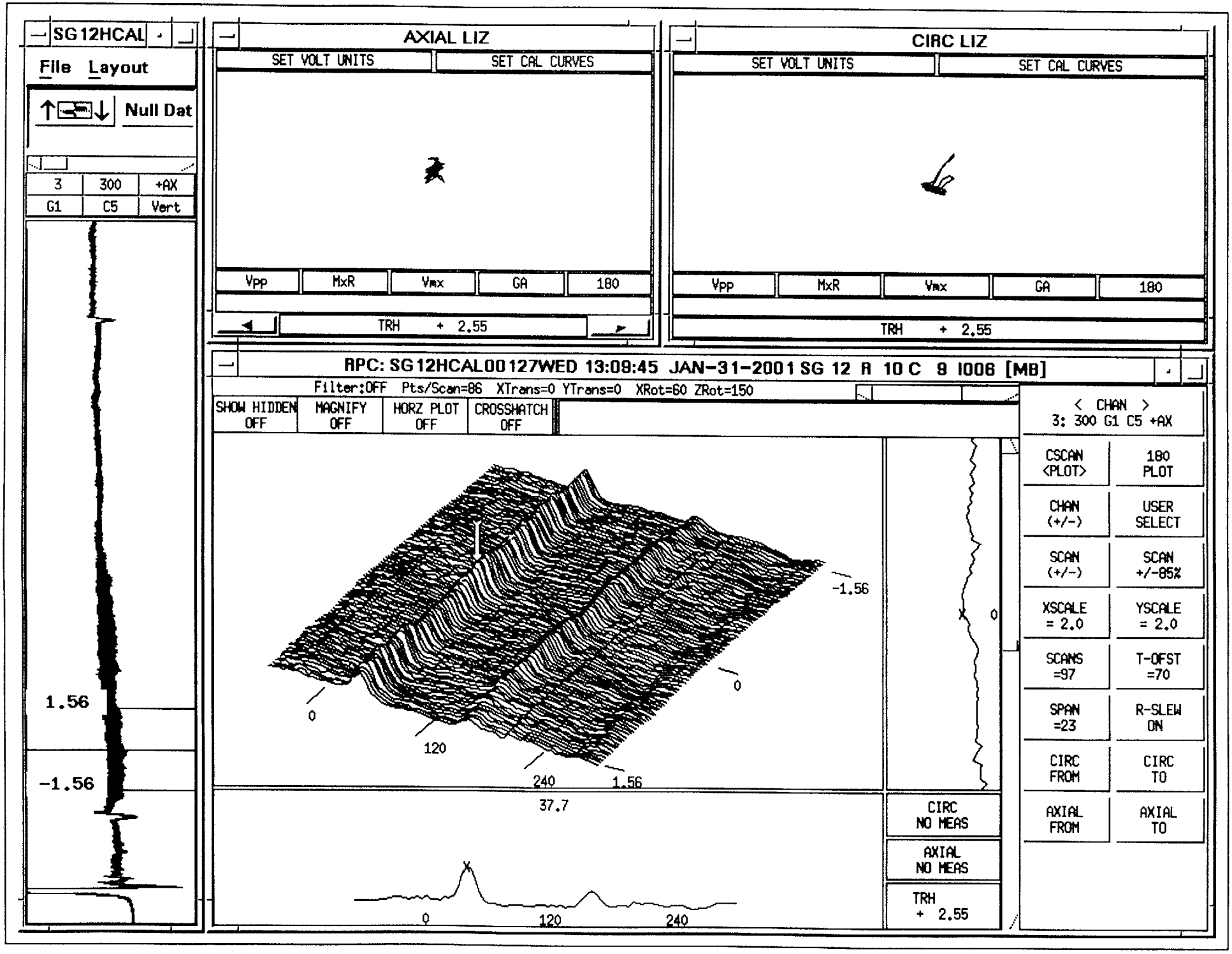
File Analysis System Tools Layout Add Displays Help

Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG12HCAL00127 WED 13:09:45 JAN-31-2001 SG 12 ROW 10 COL 9 I006

< Lmrks >	3	300	+AX	8	100	+AX	3:	300	G1	C5	+AX
Clear	G1	C5	Vert	G1	C5	Vert	0.17 v/d		span 23		rot 239




SG12HCAL
File Layout
Null Dat
3 300 +AX
G1 C5 Vert
1.56
-1.56
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 2.55
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 2.55
RPC: SG12HCAL00127WED 13:09:45 JAN-31-2001 SG 12 R 10 C 8 I006 [MB]
Filter:OFF Pts/Scan=86 XTrans=0 YTrans=0 XRot=60 ZRot=150
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
-1.56
0
0
120
240
1.56
37.7
0
120
240
CIRC NO MEAS
AXIAL NO MEAS
TRH + 2.55
< CHAN >
3: 300 G1 C5 +AX
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =97
T-OFST =70
SPAN =23
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

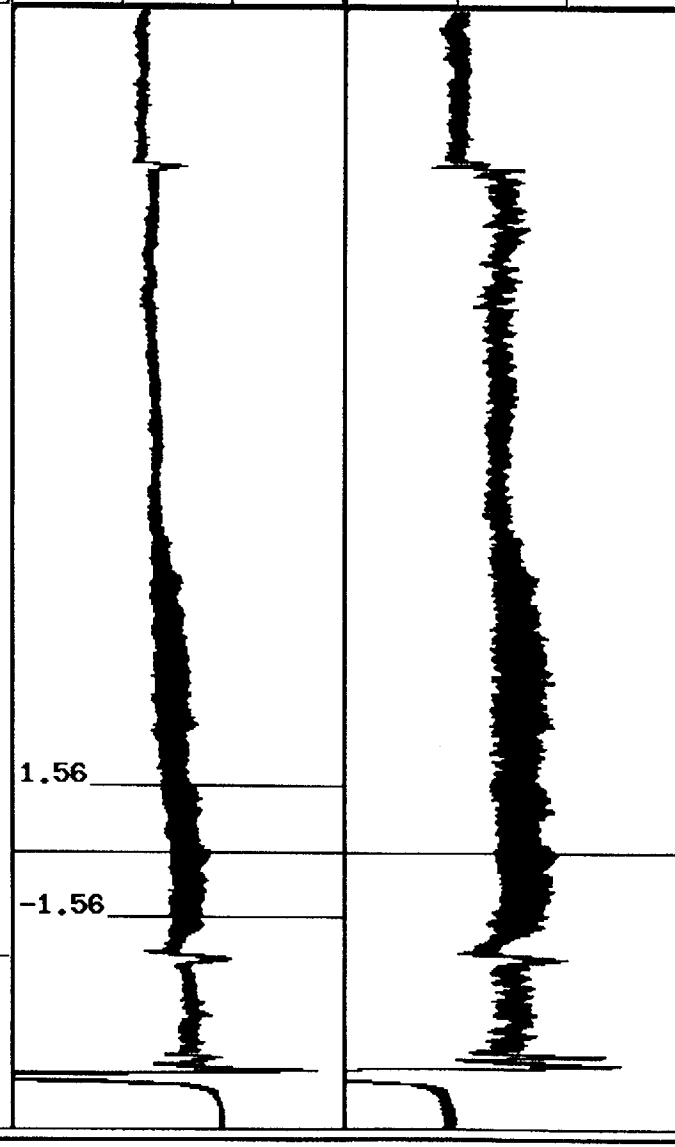
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

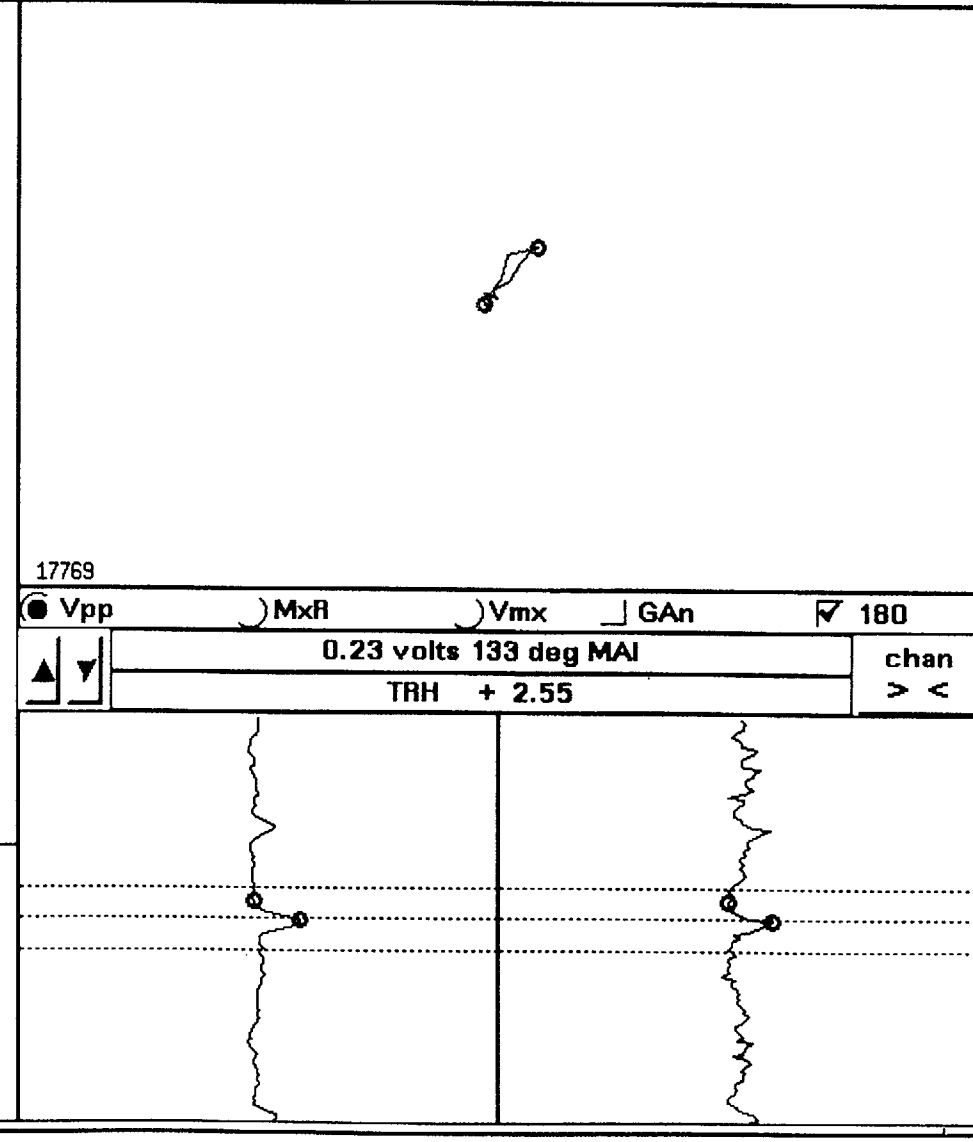
File Analysis System Tools Layout Add Displays Help

Tube Comment: NDD NBF NBF NAF NAF

SG12HCAL00127 WED 13:09:45 JAN-31-2001 SG 12 ROW 10 COL 9 I006

< Lmrks >	3	300	+AX	8	100	+AX	3:	300	G1	C5	+AX
Clear	G1	C5	Vert	G1	C5	Vert	0.17 v/d		span 23		rot 239





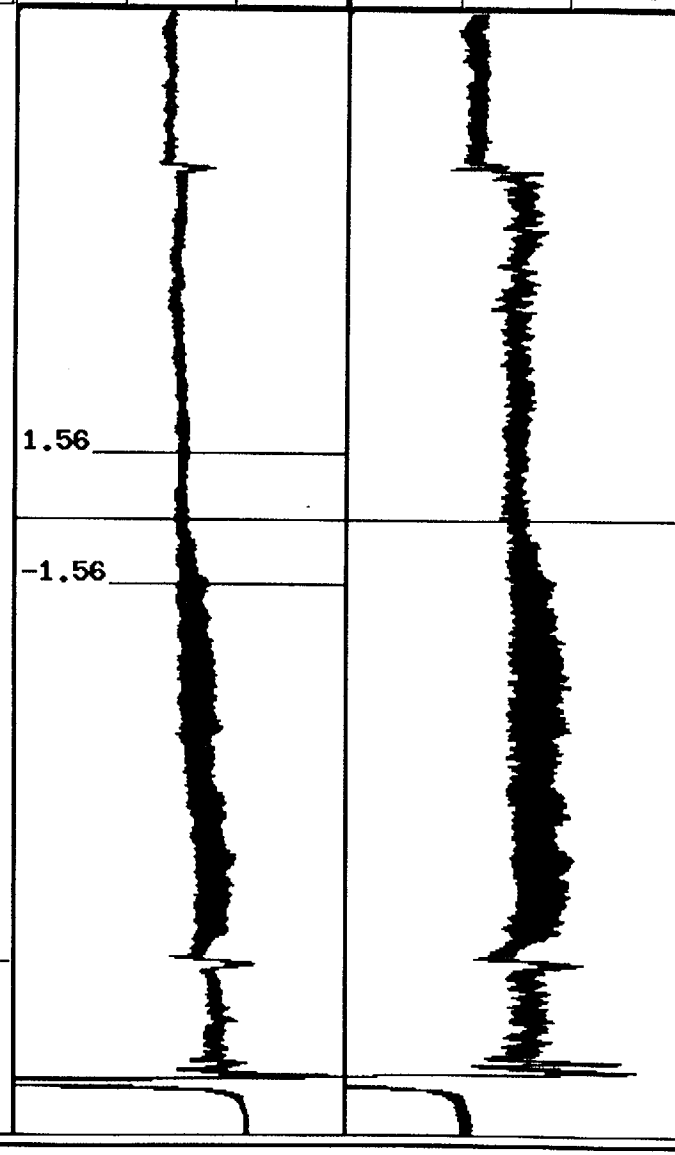
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

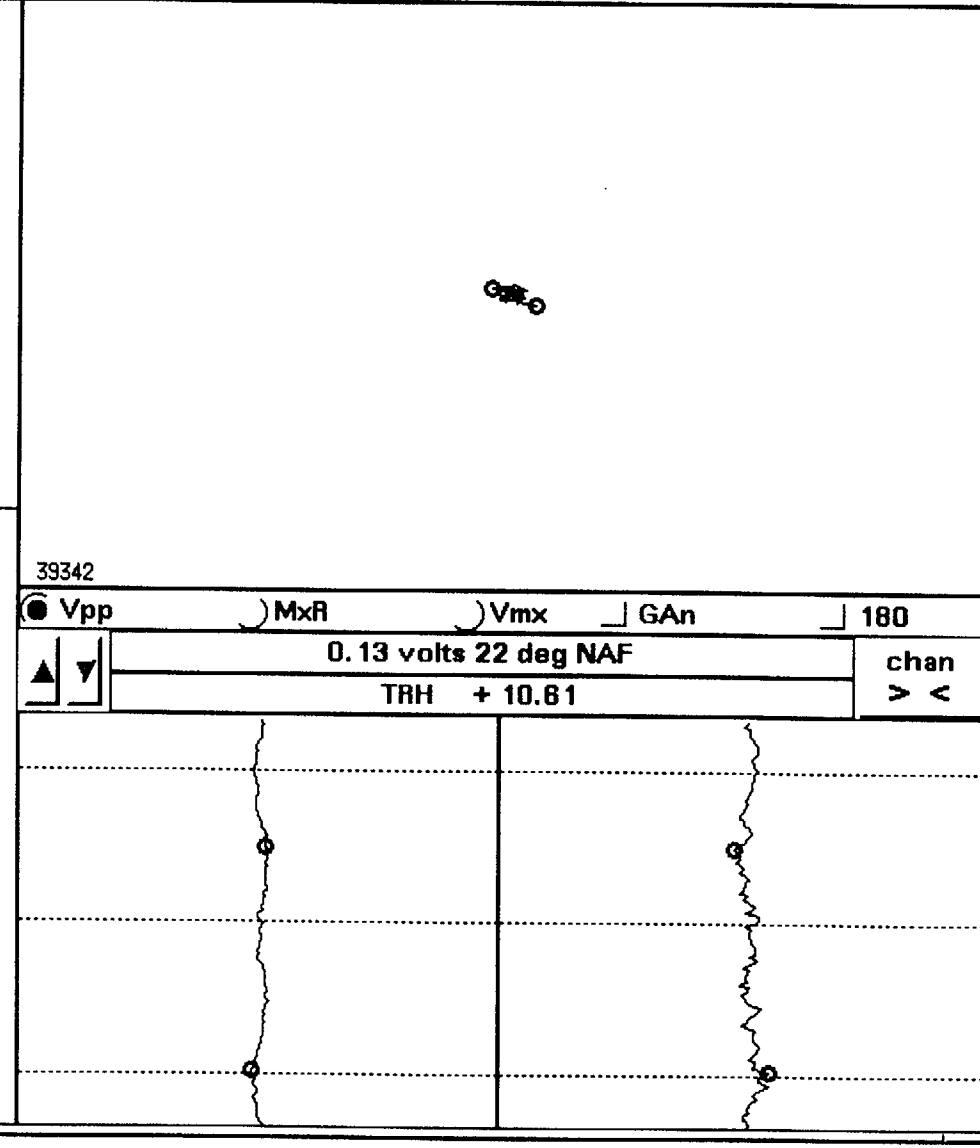
File Analysis System Tools Layout Add Displays Help

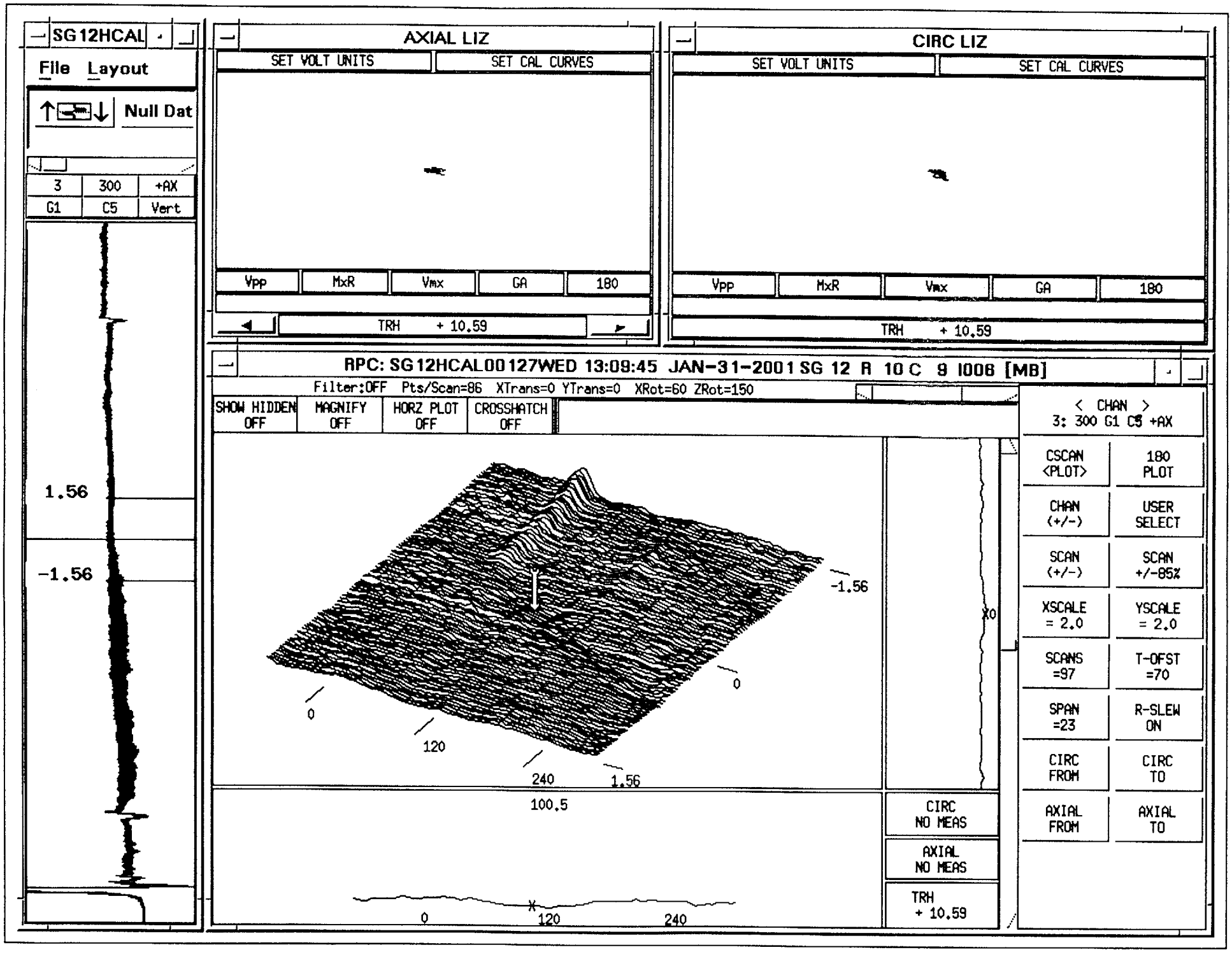
Tube Comment: | NDD | NBF | NBF | NAF | NAF

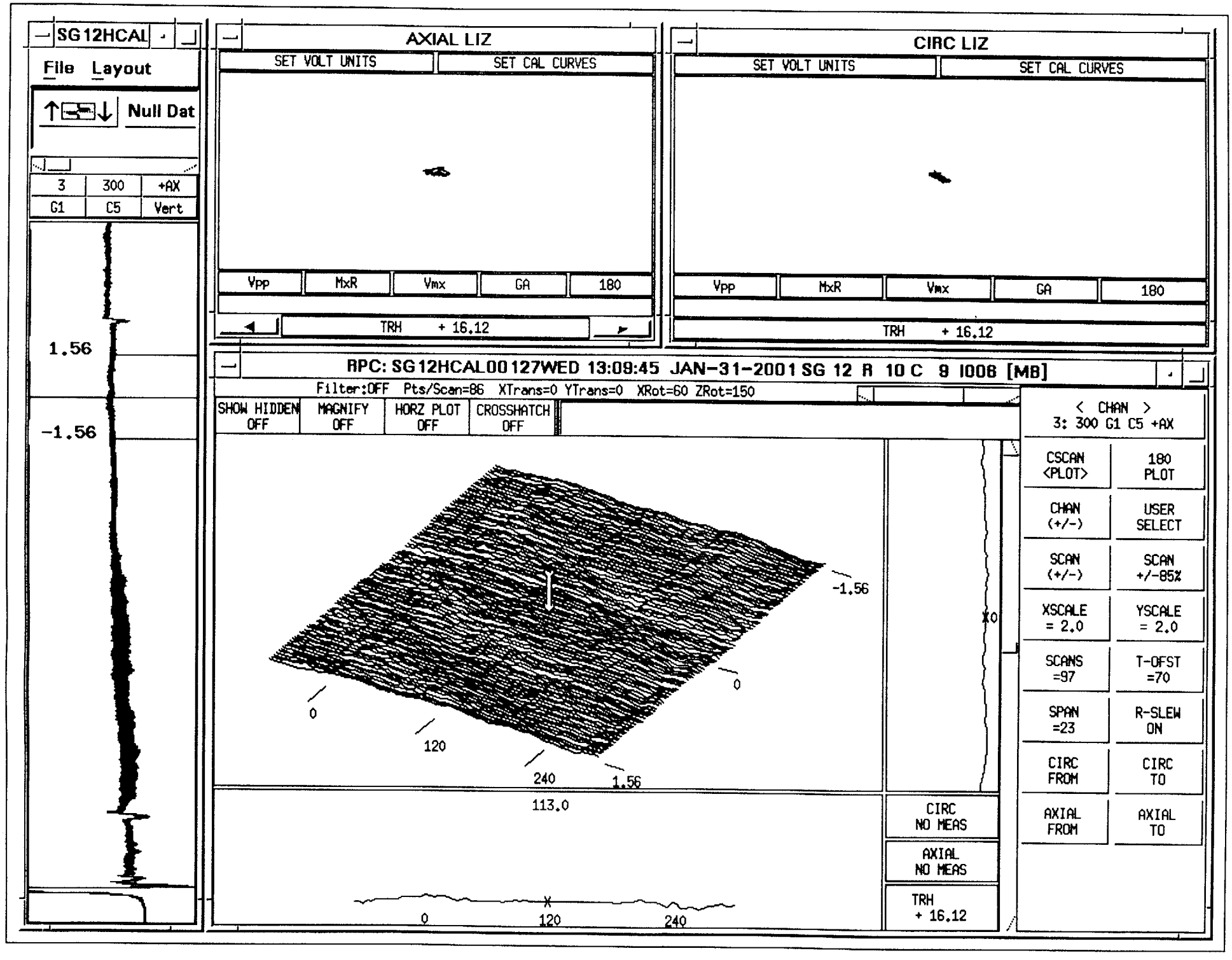
SG12HCAL00127 WED 13:09:45 JAN-31-2001 SG 12 ROW 10 COL 9 I006

< Lmrks >	3	300	+AX	8	100	+AX	3:	300	G1	C5	+AX
Clear	G1	C5	Vert	G1	C5	Vert	0.17 v/d		span 23		rot 239






SG12HCAL
File Layout
Null Dat
3 300 +AX
G1 C5 Vert
1.56
-1.56
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 10.59
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 10.59
RPC: SG12HCAL00127WED 13:09:45 JAN-31-2001 SG 12 R 10 C 9 1006 [MB]
Filter:OFF Pts/Scan=86 XTrans=0 YTrans=0 XRot=60 ZRot=150
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
-1.56
0
0
120
240
1.56
100.5
0
120
240
CIRC NO MEAS
AXIAL NO MEAS
TRH + 10.59
< CHAN >
3: 300 G1 C5 +AX
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =97
T-OFST =70
SPAN =23
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO


SG12HCAL
File Layout
Null Dat
3 300 +AX
G1 C5 Vert
1.56
-1.56
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 16.12
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
TRH + 16.12
RPC: SG12HCAL00127WED 13:09:45 JAN-31-2001 SG 12 R 10 C 9 1006 [MB]
Filter:OFF Pts/Scan=86 XTrans=0 YTrans=0 XRot=60 ZRot=150
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
-1.56
0
0
120
240
1.56
113.0
0
120
240
CIRC NO MEAS
AXIAL NO MEAS
TRH + 16.12
< CHAN >
3: 300 G1 C5 +AX
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =97
T-OFST =70
SPAN =23
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

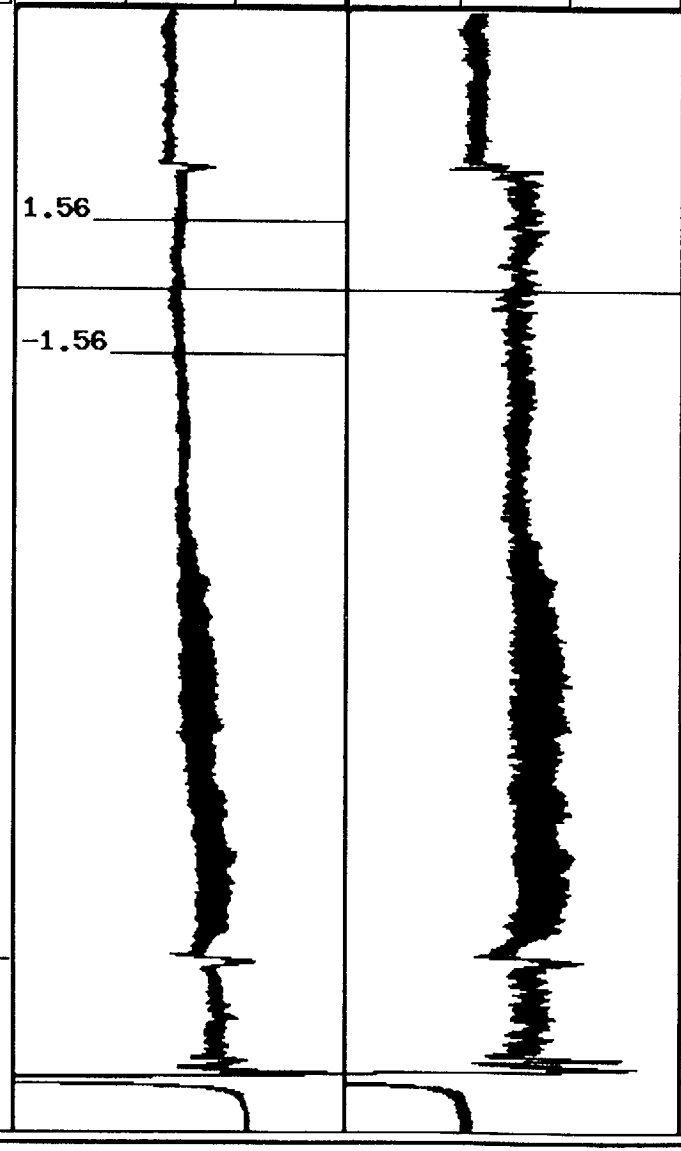
File Analysis System Tools Layout Add Displays Help

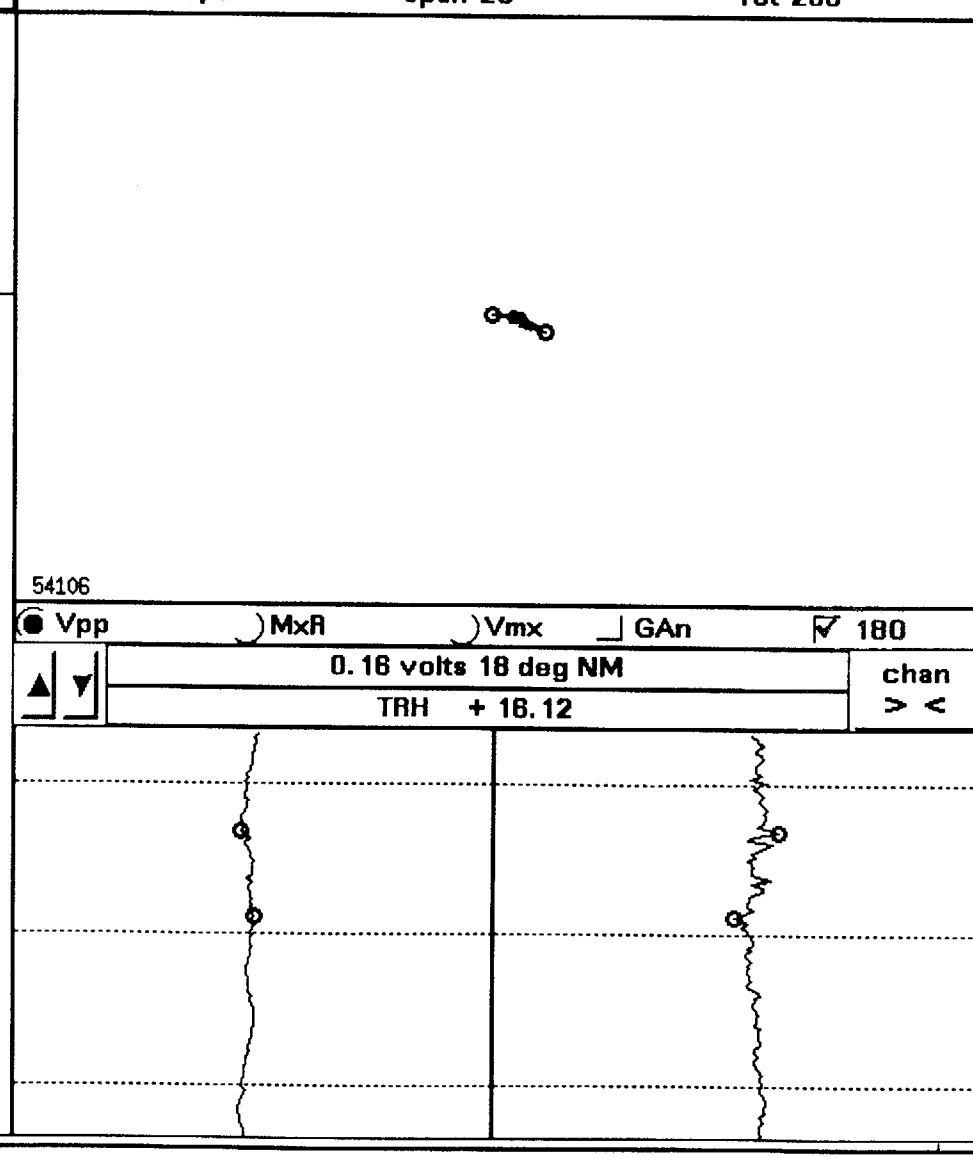
Tube Comment:

NDD	NBF	NBF	NAF	NAF

SG12HCAL00127 WED 13:09:45 JAN-31-2001 SG 12 ROW 10 COL 9 I006

< Lmrks >	3	300	+AX	8	100	+AX	3:	300	G1	C5	+AX
Clear	G1	C5	Vert	G1	C5	Vert	0.17 v/d		span 23		rot 239





1P2

FILE: /mnt/server3_results/science/SG24CCAL00058 ANALYST: F3453 DATE: WED FEB. 7,2001 17:49 L

Disk Label= Unknown L

24	2	5	1.38	32	NBF	2	06H	+5.86	06H06C	VPP	F3453	science	DCR002C0051003	0
24	2	5	0.93	0	NBF	2	06H	+5.86	06H06C	VM	F3453	science	DCR002C0051003	1
24	2	5	1.38	43	NAF	2	06H	+8.27	06H06C	VPP	F3453	science	DCR002C0051003	2
24	2	5	0.99	0	NAF	2	06H	+8.27	06H06C	VM	F3453	science	DCR002C0051003	3
24	2	5	1.37	40	NM	2	06H	+5.46	06H06C	VPP	F3453	science	DCR002C0051003	4
24	2	5	0.91	0	NM	2	06H	+5.46	06H06C	VMX	F3453	science	DCR002C0051003	5
24	2	5	3.08	23	SAI	2	06H	+6.79	06H06C	VPP	F3453	science	DCR002C0051003	6
24	2	5	1.43	0	SAI	2	06H	+6.79	06H06C	VMX	F3453	science	DCR002C0051003	7

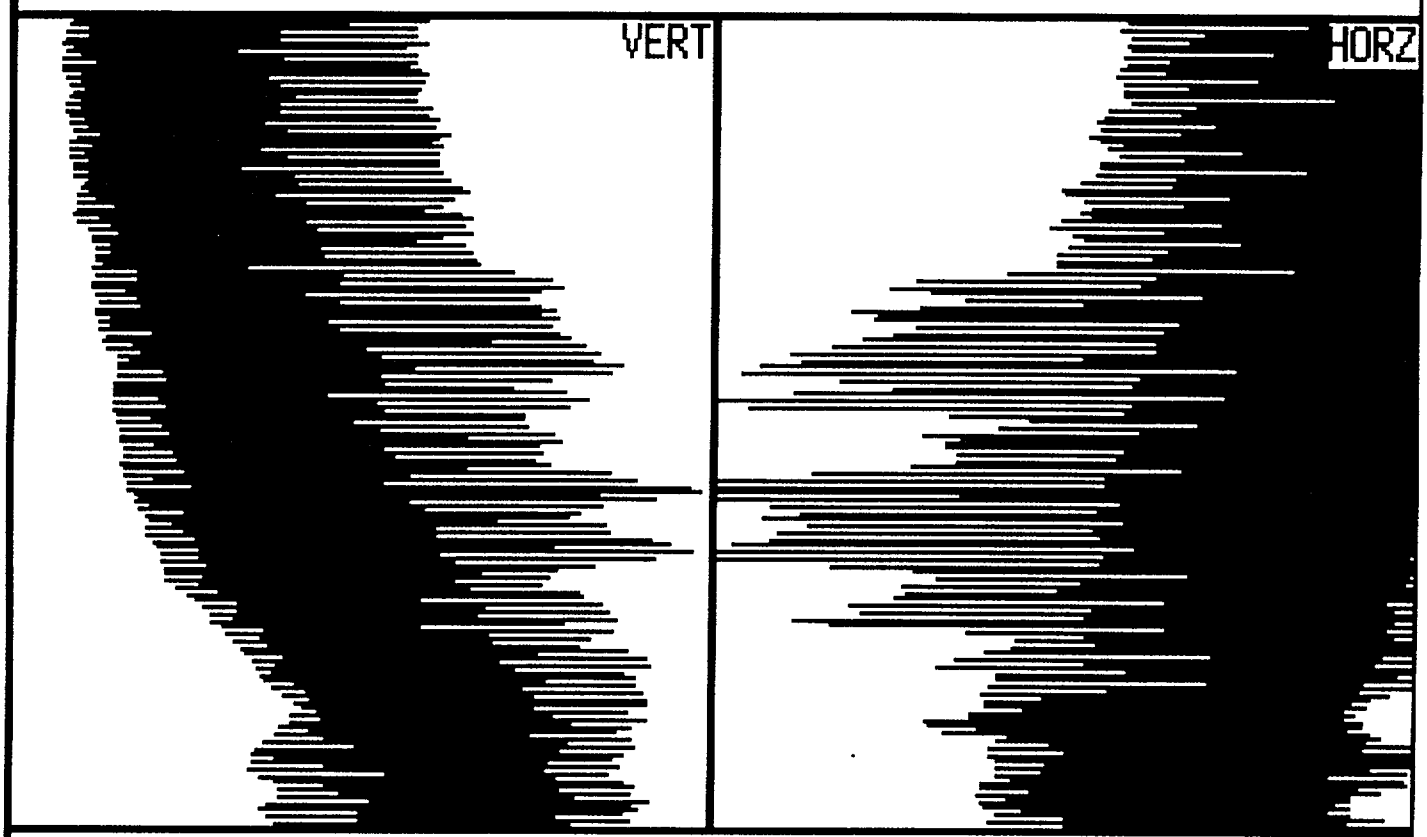
IP2

R2C5

IP2 R2C5

SNR WIDGET

NOISE ONLY | DIFF SIGNL | AXIAL FLAW | FIND SIGNAL END PTS | SET NOISE START | SET NOISE END



NOISE RMS

T: 0.44v

V: 0.32v

H: 0.30v

Total Data Pts: 17626

PLOT DATA | SHOW NOISE | DONE

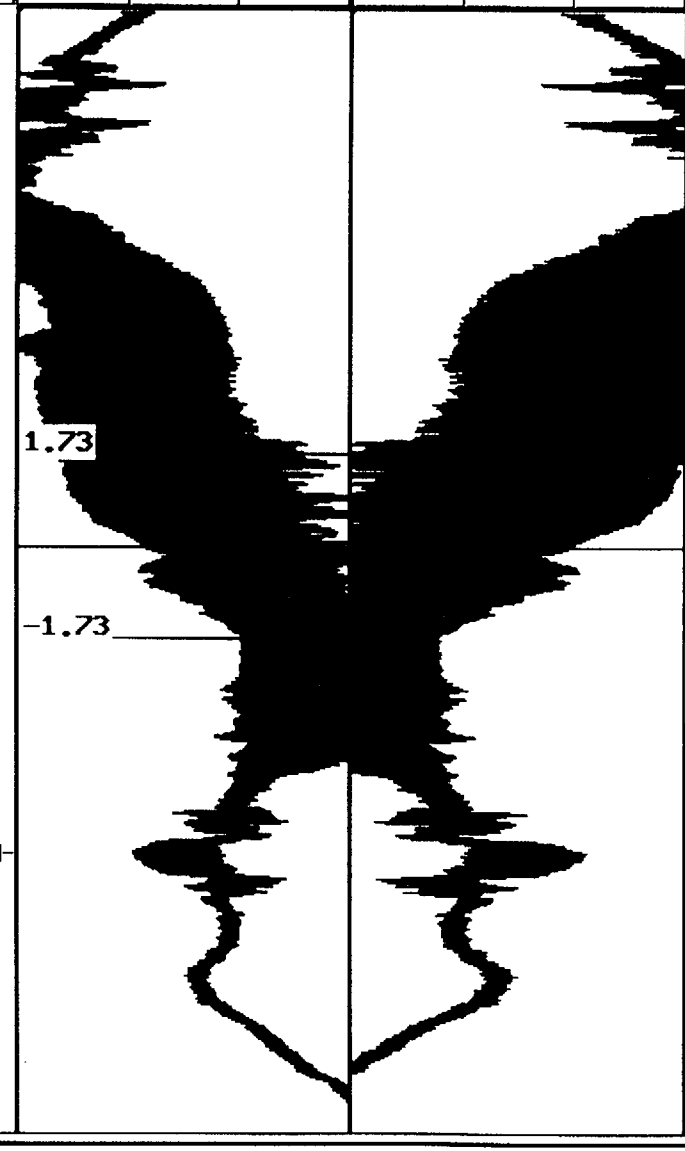
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

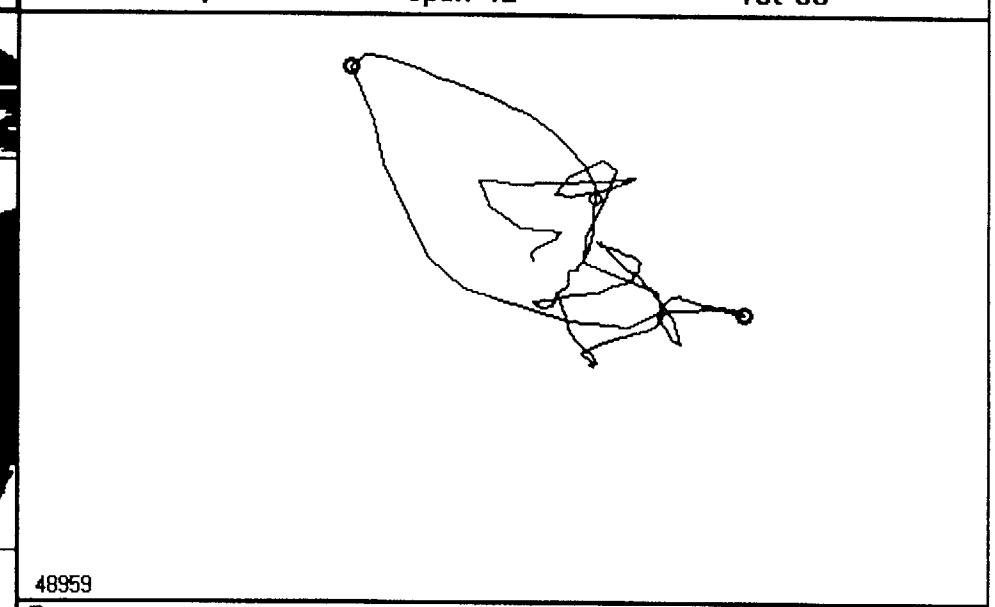
File Analysis System Tools Layout Add Displays Help

Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG24CCAL00058 SAT 20:31:36 JUN-07-97 SG 24 ROW 2 COL 5 I003

< Lmrks >	2	300		P2	300		2:	300	G0	C1
Clear	G0	C1	Vert	G0	C1	Vert	0.18 v/d	span 12	rot 90	



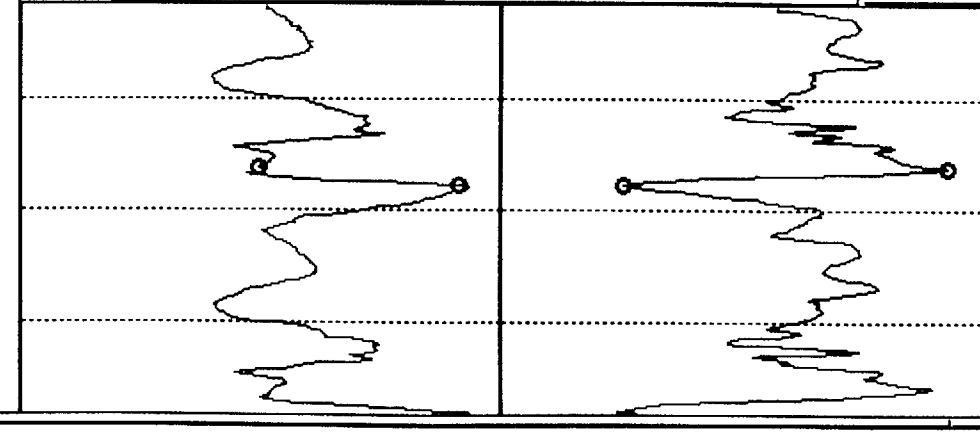


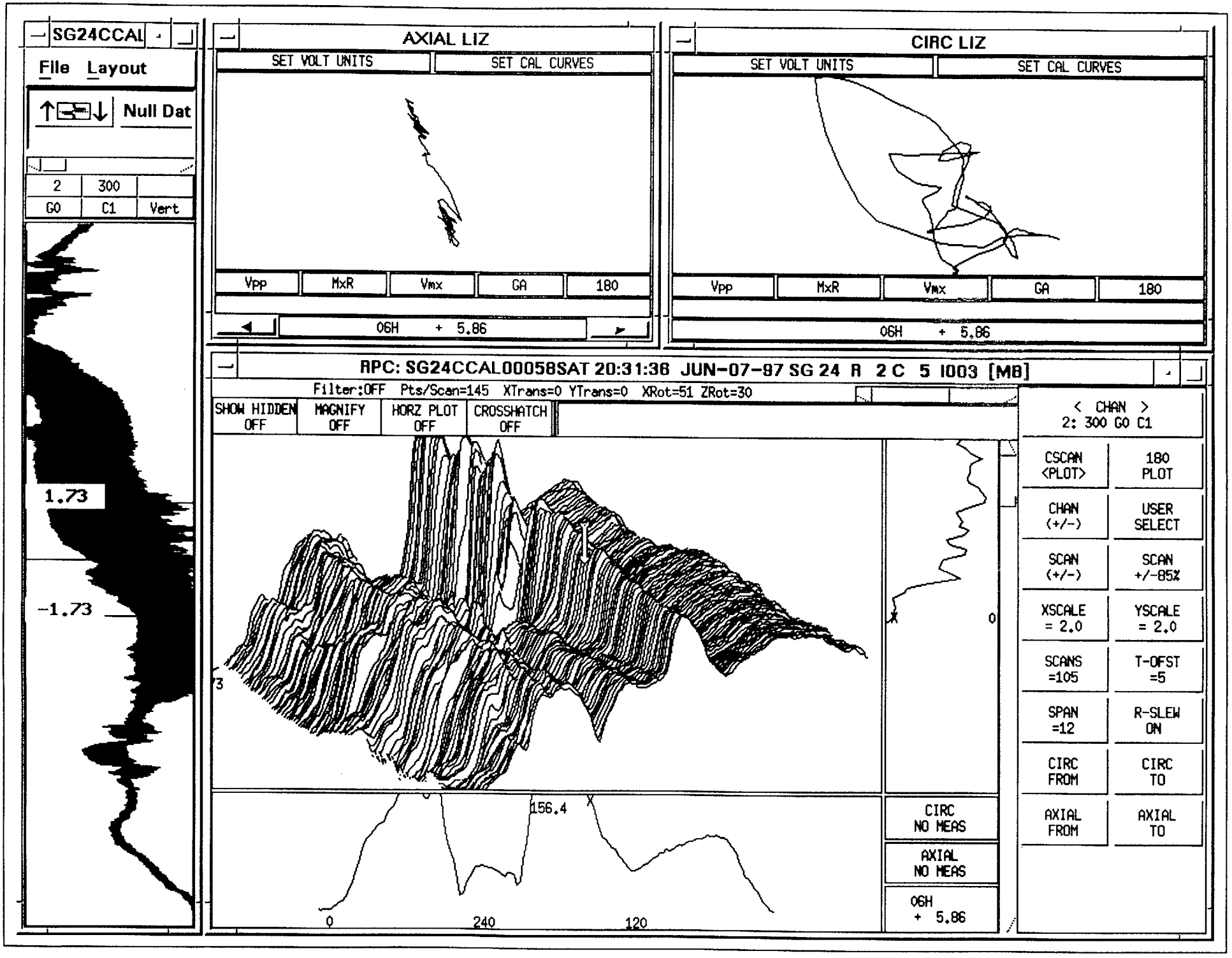
Vpp MxR Vmx GAn 180

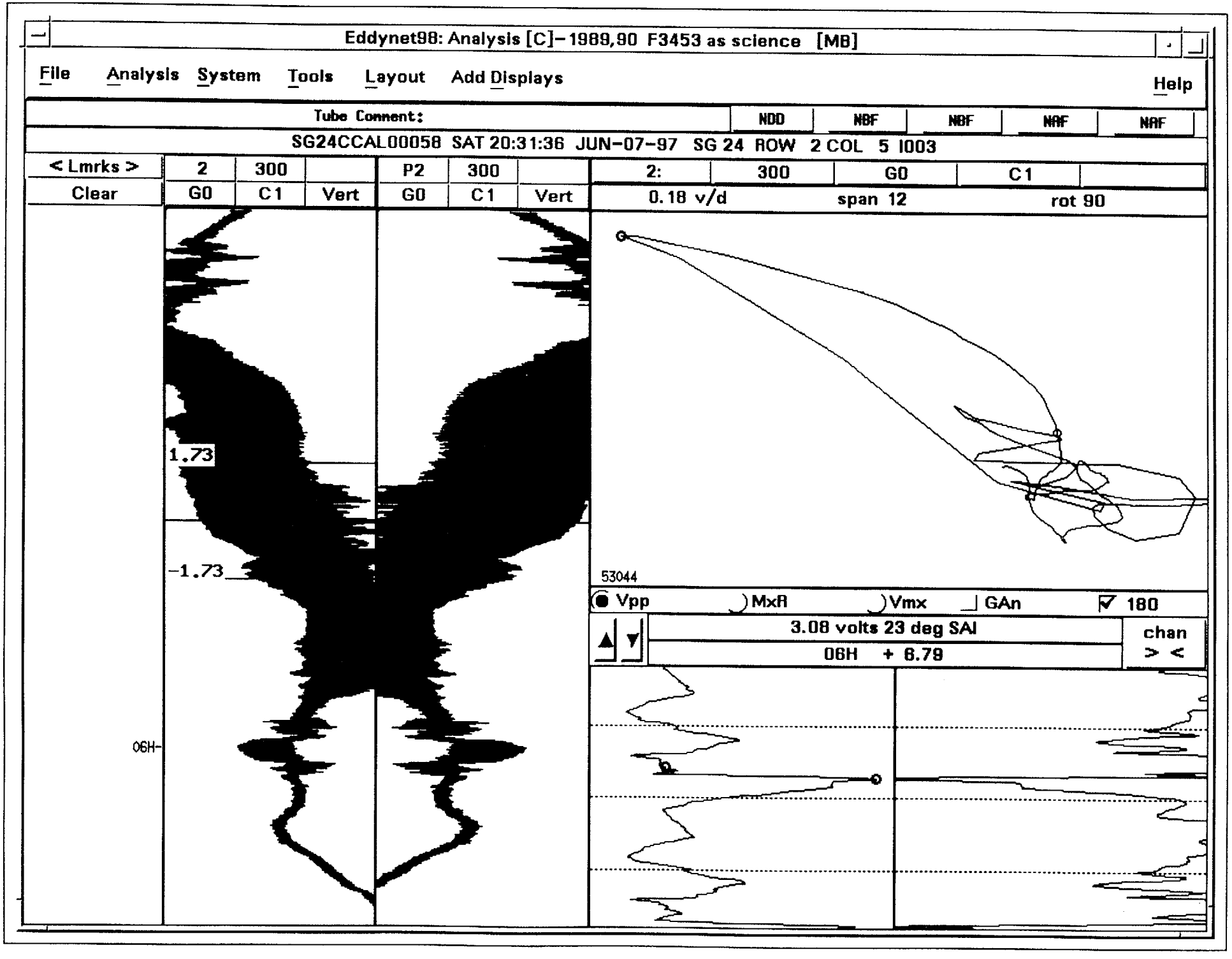
1.38 volts 32 deg NBF

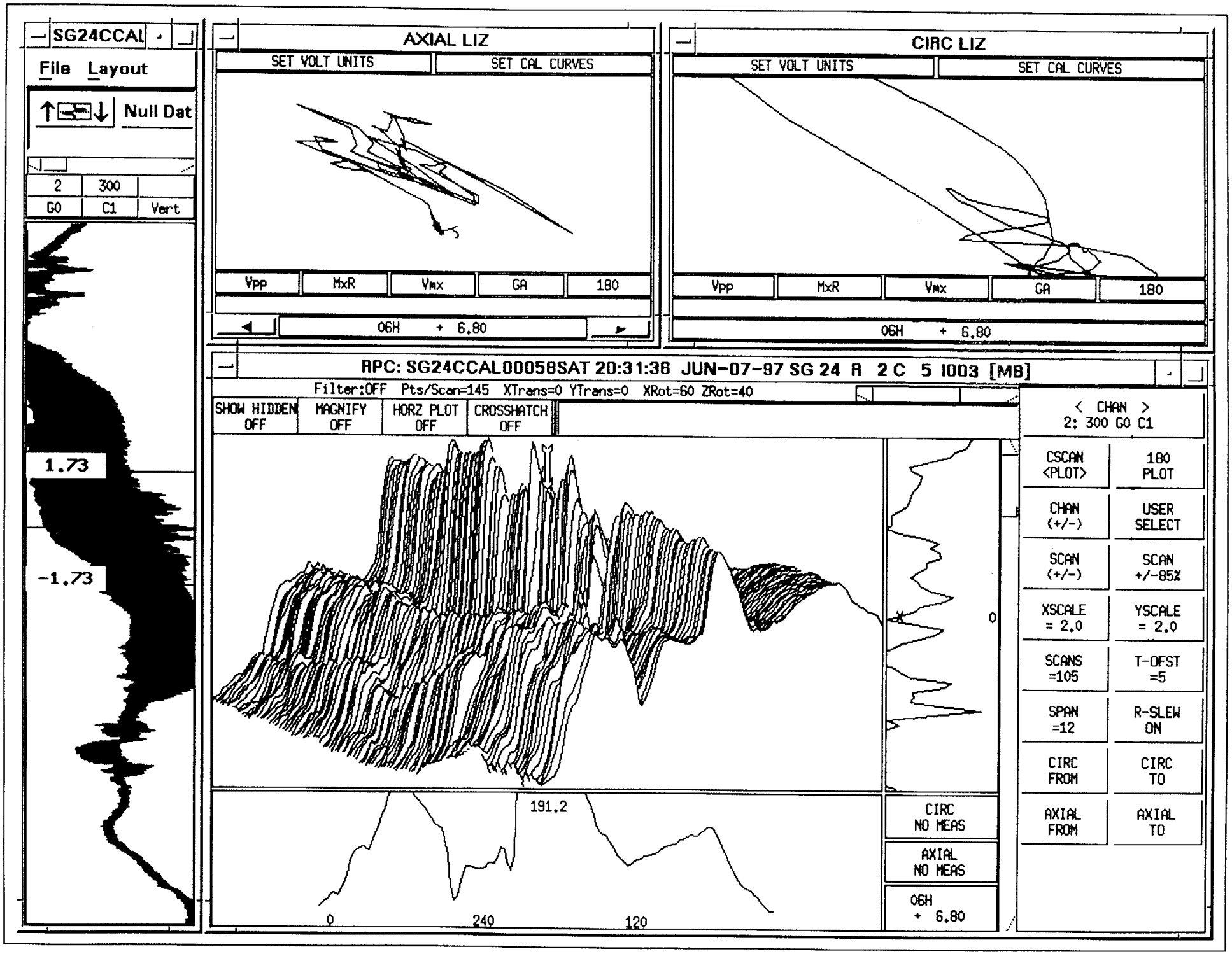
06H + 5.86

chan > <




SG24CCAL
File Layout
Null Dat
2 300
G0 C1 Vert
1.73
-1.73
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
06H + 5.86
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
06H + 5.86
RPC: SG24CCAL00058SAT 20:31:36 JUN-07-97 SG 24 R 2 C 5 1003 [MB]
Filter:OFF Pts/Scan=145 XTrans=0 YTrans=0 XRot=51 ZRot=30
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
156.4
0
240
120
CIRC NO MEAS
AXIAL NO MEAS
06H + 5.86
< CHAN >
2: 300 G0 C1
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =105
T-OFST =5
SPAN =12
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO


Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]
File
Analysis
System
Tools
Layout
Add Displays
Help
Tube Comment:
NDD
NBF
NBF
NAF
NAF
SG24CCAL00058 SAT 20:31:36 JUN-07-97 SG 24 ROW 2 COL 5 I003
< Lmrks >
Clear
2
300
G0
C1
Vert
P2
300
G0
C1
Vert
2:
300
G0
C1
0.18 v/d
span 12
rot 90
1.73
-1.73
06H-
53044
Vpp
MxR
Vmx
GAn
180
3.08 volts 23 deg SAI
06H + 6.79
chan
> <


SG24CCAL
File Layout
Null Dat
2 300
G0 C1 Vert
1.73
-1.73
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
06H + 6.80
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
06H + 6.80
RPC: SG24CCAL00058SAT 20:31:36 JUN-07-97 SG 24 R 2 C 5 1003 [MB]
Filter:OFF Pts/Scan=145 XTrans=0 YTrans=0 XRot=60 ZRot=40
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
191.2
0
240
120
CIRC NO MEAS
AXIAL NO MEAS
06H + 6.80
< CHAN >
2: 300 G0 C1
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =105
T-OFST =5
SPAN =12
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

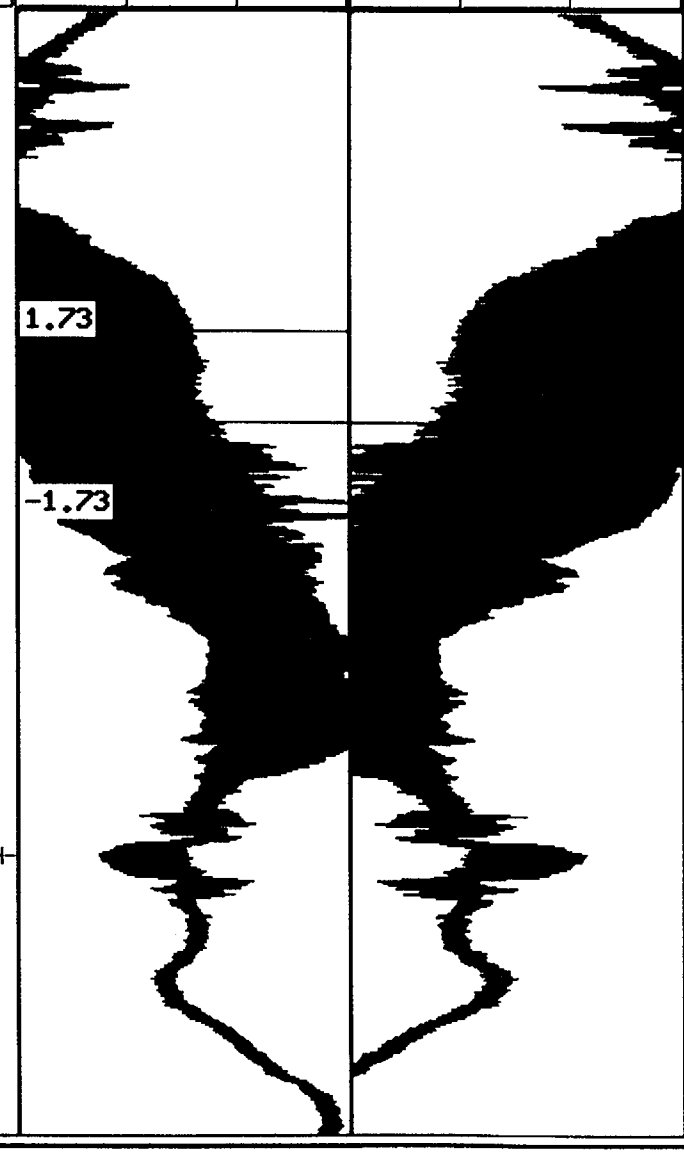
Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

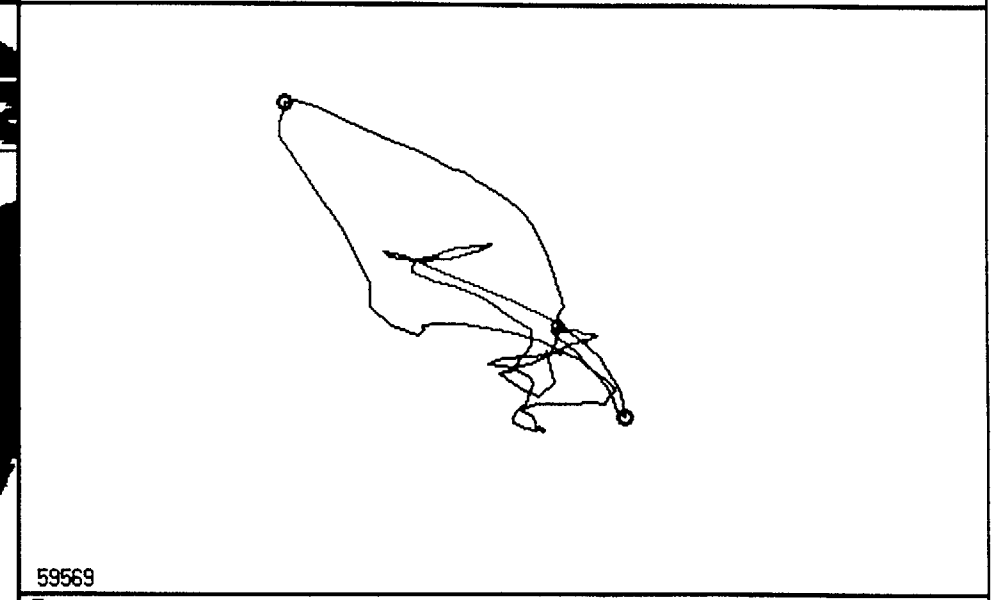
File Analysis System Tools Layout Add Displays Help

Tube Comment: | NDD | NBF | NBF | NAF | NAF

SG24CCAL00058 SAT 20:31:36 JUN-07-97 SG 24 ROW 2 COL 5 I003

< Lmrks >	2	300		P2	300		2:	300	G0	C1	
Clear	G0	C1	Vert	G0	C1	Vert	0.18 v/d		span 12		rot 90



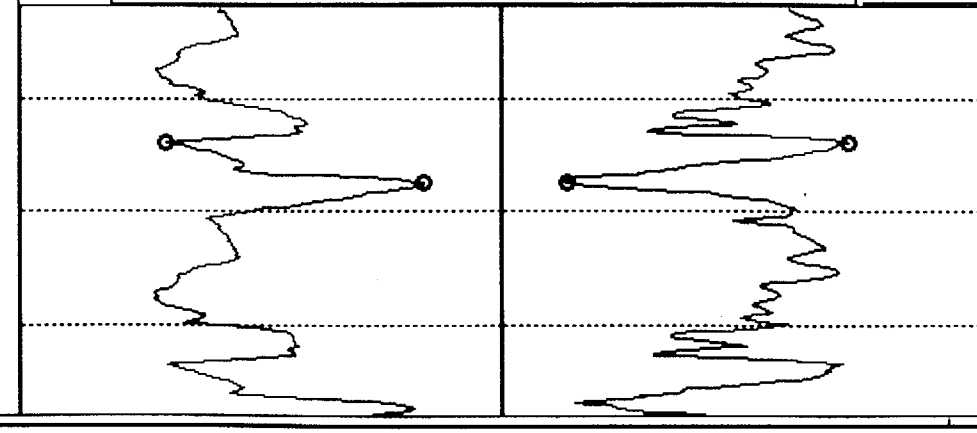


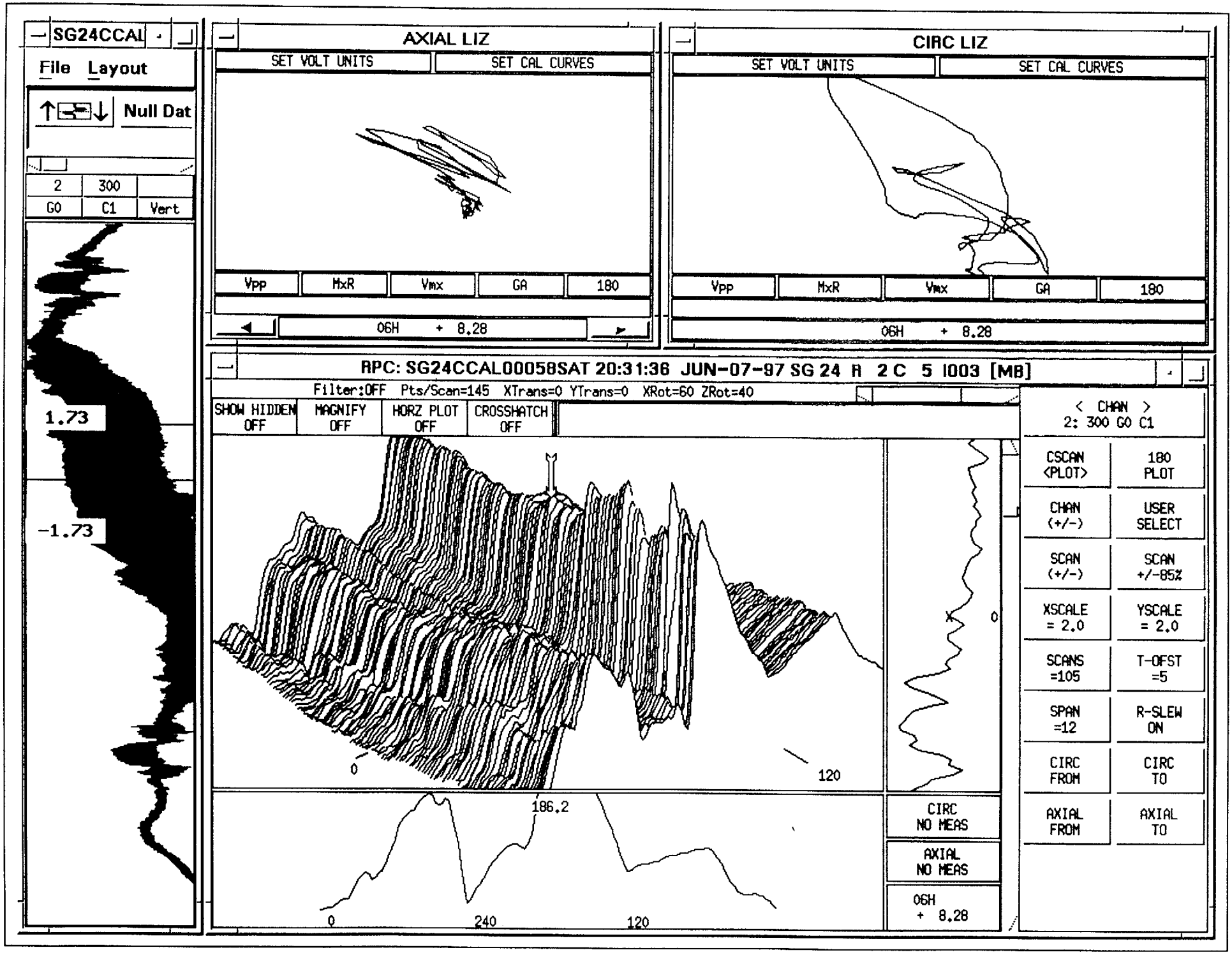
Vpp MxR Vmx GAn 180

1.38 volts 43 deg NAF

06H + 8.27

chan > <




SG24CCAL
File Layout
Null Dat
2 300
GO C1 Vert
1.73
-1.73
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
06H + 8.28
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
06H + 8.28
RPC: SG24CCAL00058SAT 20:31:36 JUN-07-97 SG 24 R 2 C 5 1003 [MB]
Filter:OFF Pts/Scan=145 XTrans=0 YTrans=0 XRot=60 ZRot=40
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
0
120
186.2
0
240
120
CIRC NO MEAS
AXIAL NO MEAS
06H + 8.28
< CHAN >
2: 300 GO C1
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =105
T-OFST =5
SPAN =12
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO

Eddynet98: Analysis [C]-1989,90 F3453 as science [MB]

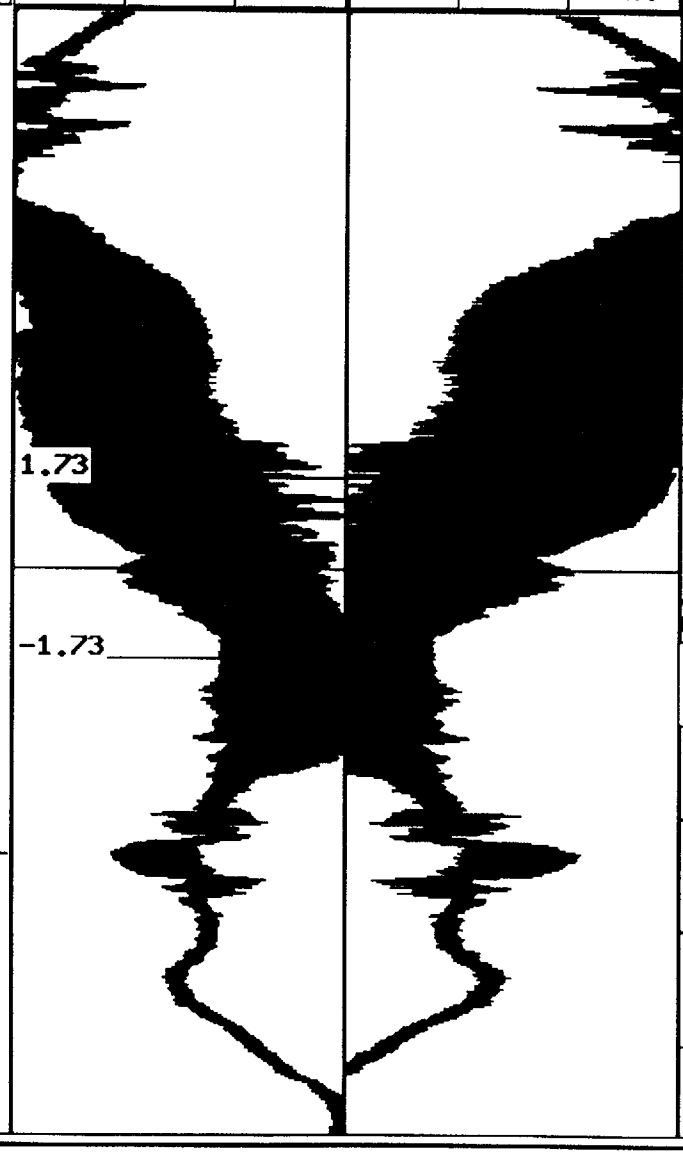
File Analysis System Tools Layout Add Displays Help

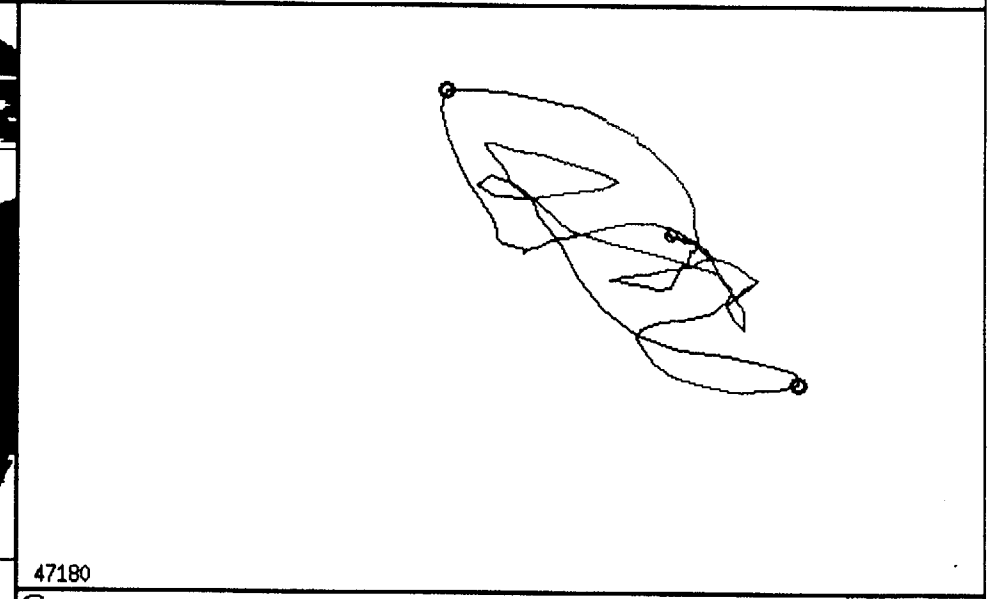
Tube Comment: NOD NBF NBF NAF NAF

SG24CCAL00058 SAT 20:31:36 JUN-07-97 SG 24 ROW 2 COL 5 1003

< Lmrks > | 2 | 300 | | P2 | 300 | | 2: | 300 | G0 | C1 |

Clear | G0 | C1 | Vert | G0 | C1 | Vert | 0.18 v/d | span 12 | rot 90



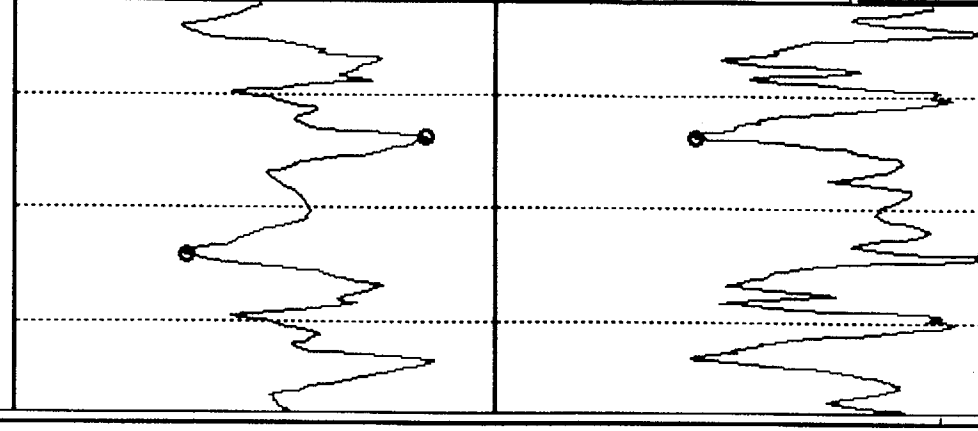


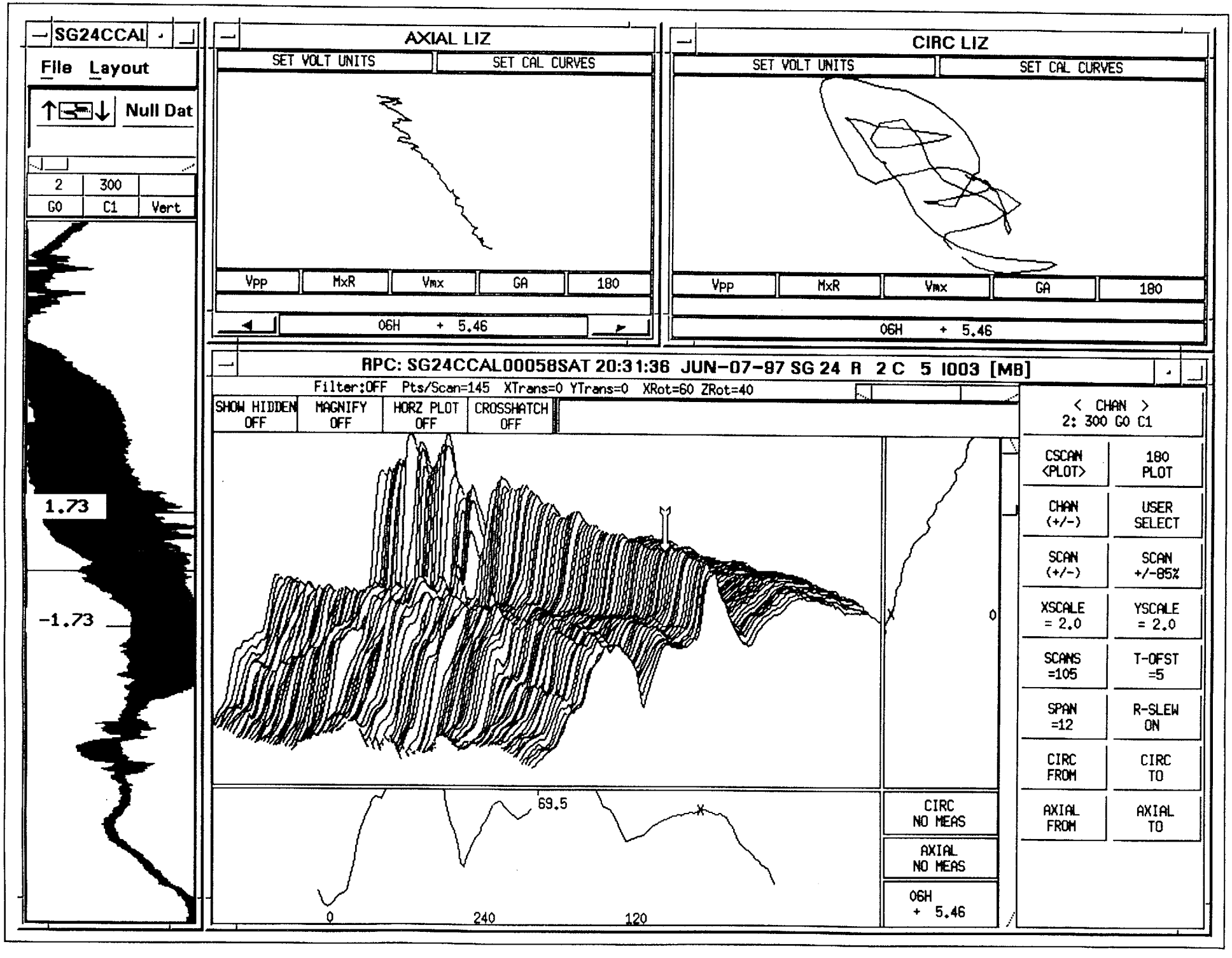
Vpp MxR Vmx GAn 180

1.37 volts 40 deg NM

06H + 5.46

chan > <




SG24CCAL
File Layout
Null Dat
2 300
G0 C1 Vert
1.73
-1.73
AXIAL LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
06H + 5.46
CIRC LIZ
SET VOLT UNITS
SET CAL CURVES
Vpp MxR Vmx GA 180
06H + 5.46
RPC: SG24CCAL00058SAT 20:31:36 JUN-07-87 SG 24 R 2 C 5 1003 [MB]
Filter:OFF Pts/Scan=145 XTrans=0 YTrans=0 XRot=60 ZRot=40
SHOW HIDDEN OFF
MAGNIFY OFF
HORZ PLOT OFF
CROSSHATCH OFF
69.5
0
240
120
CIRC NO MEAS
AXIAL NO MEAS
06H + 5.46
< CHAN >
2: 300 G0 C1
CSCAN <PLOT>
180 PLOT
CHAN (+/-)
USER SELECT
SCAN (+/-)
SCAN +/-85%
XSCALE = 2.0
YSCALE = 2.0
SCANS =105
T-OFST =5
SPAN =12
R-SLEW ON
CIRC FROM
CIRC TO
AXIAL FROM
AXIAL TO